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ABSTRACT

This training manual for educational counselors, administrators, and faculty involved with placement services (assistance to school graduates or leavers in obtaining employment or further education) and follow-up studies (examination of the performance of former students in the areas in which they received training) is part of a Florida Department of Education project undertaken to identify the competencies that community college personnel need to interpret placement and follow-up data. The first part of the manual describes the competencies (in program design, research, and communication) identified as necessary to the performance of placement and follow-up services. The second section covers training activities which specifically address these competencies and which can be used in a workshop format. The training activities for program design include institutional mission; institutional goals; program goals; program and course competencies; local business, industry and government employers; and state and federal reporting requirements. Research activities include placement and follow-up instrumentation; research methodology; questionnaire development; basic statistics; analysis and interpretation of data; computer applications; and presentation of data. Activities for communication include needs analysis; data collection; dissemination of reports; and implications. The third major section provides resource material for the three competency areas and for the effective use of educational follow-up information, as well as placement and follow-up report formats. A glossary and a bibliography are also provided. (WAS)

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COMPETENCIES FOR PLACEMENT AND FOLLOW-UP PERSONNEL:

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WORKSHOP AND RESOURCE MATERIALS

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Ralph D. Turlington, Commissioner of Education
Tallahassee, Florida
Affirmative action/equal opportunity employer
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Adopted, State Board of Education, Jan. 20, 1981

This public document was promulgated at a cost of $4,753.67, or $5.592 per copy, to provide community college and vocational-technical center personnel with information on the competencies essential to placement and follow-up efforts.

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WORKSHOP AND RESOURCE MATERIALS

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CONTENTS

INTRODUCTION. 3

PLACEMENT AND FOLLOW-UP COMPETENCIES. 7

TRAINING ACTIVITIES.. 13

RESOURCE MATERIALS

I. PROGRAM DESIGN. 71

II. RESEARCH. 77

III. COMMUNICATION. 95

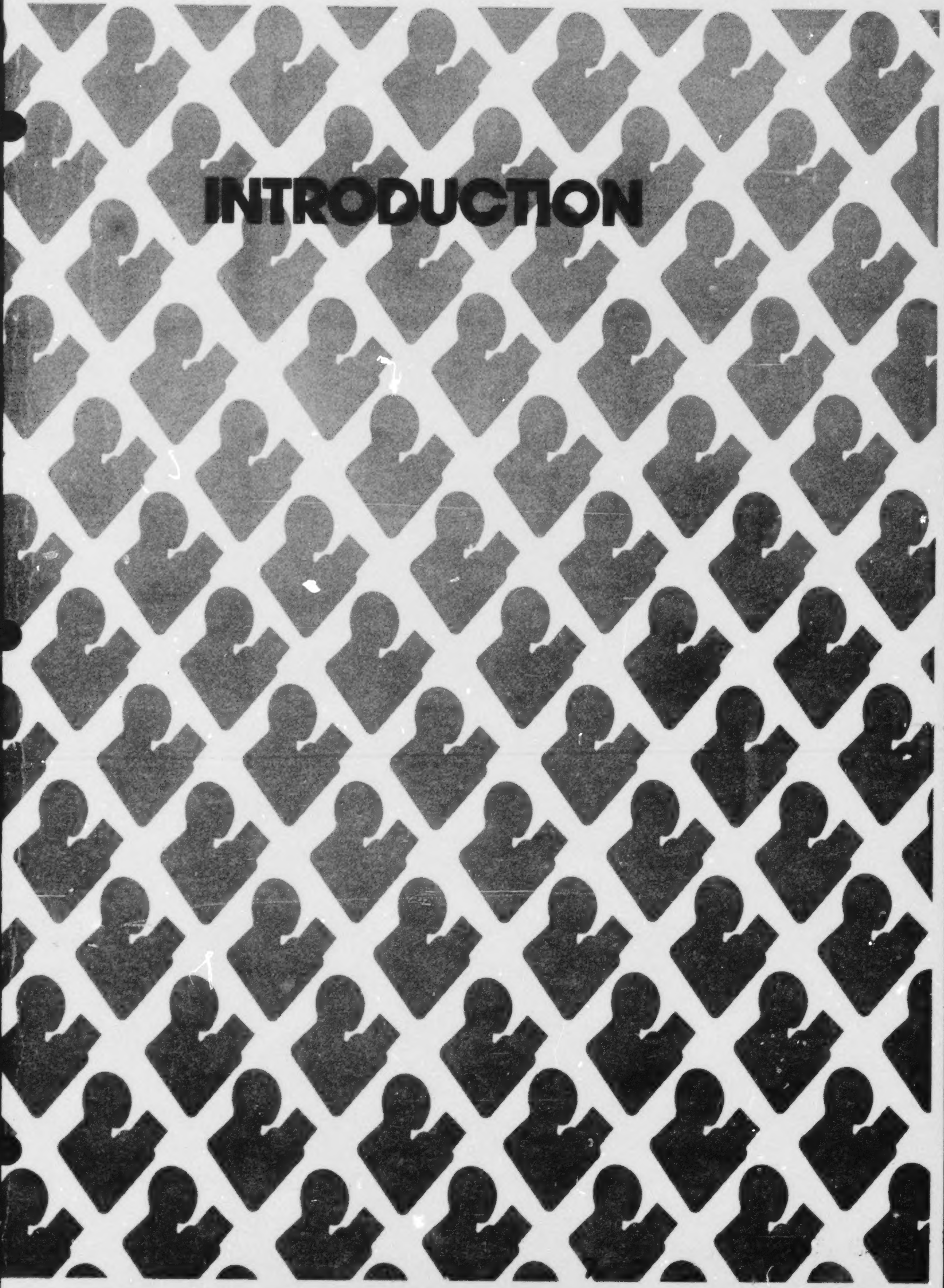
IV. MAKING EFFECTIVE USE OF EDUCATIONAL FOLLOW-UP INFORMATION.. 103

V. PLACEMENT AND FOLLOW-UP REPORT FORMS. 131

GLOSSARY OF PLACEMENT AND FOLLOW-UP TERMS.. 175

BIBLIOGRAPHY. 179

INTRODUCTION



INTRODUCTION

Placement and follow-up of students are vital facets of the community college program. For the purposes of this manual, *placement services* are defined as assistance to school graduates or leavers, depending upon the desires of the individual to obtain gainful employment, to enroll for further education, or to engage in a combination of employment and further education. *Follow-up studies* are defined as the systematic examination of the performance of former students in the areas in which they received training. Taken together, placement and follow-up constitute a most important phase of the mission of the community college.

For years, a number of states, including Florida, have encouraged placement and follow-up efforts. The state of Florida first legislated the collection of placement and follow-up data in the 1960s. Specifically, 230.651, Florida Statutes, and 6A-14.55(4), Regulations of the State Board of Education, require that community colleges evaluate the performance of former students in the activities for which the college prepared them, and then review and revise their programs in light of the information received.

Institutions have generally appointed staff members as placement and follow-up personnel, and then trained them to draw conclusions about the adequacy of program goals and objectives on the basis of the follow-up information collected. Due to their student contacts, community college counselors, in particular, can benefit from this type of training, designed to enable them to analyze placement and follow-up data, draw conclusions, and develop strategies for institutional renewal. This manual addresses three competencies judged necessary for inclusion in the training of personnel who will be applying placement and follow-up data: program design, research, and communication.

The manual was conceptually developed as a part of an initial placement and follow-up grant from the Florida Department of Education, Division of Vocational Education, awarded in fiscal year 1977-78. Through subsequent grant renewals, a project was undertaken to identify the competencies that community college personnel need to interpret placement and follow-up data. The primary focus of the project, entitled "Competency-based Staff Development Training for Community College Counselors and Administrators Working with Placement and Follow-up Data Interpretation," involved: (1) competency identification; (2) development of a manual detailing the competencies; and (3) regional workshops to train counselors, program managers, and administrators to make maximum use of placement and follow-up data.

Initially, personnel in several states with exemplary placement and follow-up systems were queried concerning the research they had done in identifying placement and follow-up competencies. The assistance of the Southern Regional Education Board was also solicited. The findings revealed that many states were active in placement and follow-up, but that very little had been written on this topic.

In Florida, each of the twenty-eight community colleges employs an individual who is designated as the institution's placement and follow-up specialist. In most cases, the duty is an additional responsibility for a research officer, a counselor, or, at smaller schools, the dean of student services. These specialists were surveyed and asked to detail the competencies that they felt were necessary for the collection and interpretation of placement and follow-up data. The results of this survey led to the creation of a set of preliminary competencies, which were presented to the student services staff, program administrators, and deans at Florida Keys Community College. Following their critique, specific placement and follow-up competency statements were developed and presented to Florida placement and follow-up officers at their annual statewide meeting in August, 1978. Comments from these individuals led to a further refinement of the competency statements.

Input on the refined competencies was then solicited from Florida's Division of Community Colleges' Placement and Follow-up Advisory Committee. The resultant competency statements, which appear in the next section of this manual, cover the three general skill areas of program design, research, and communication.

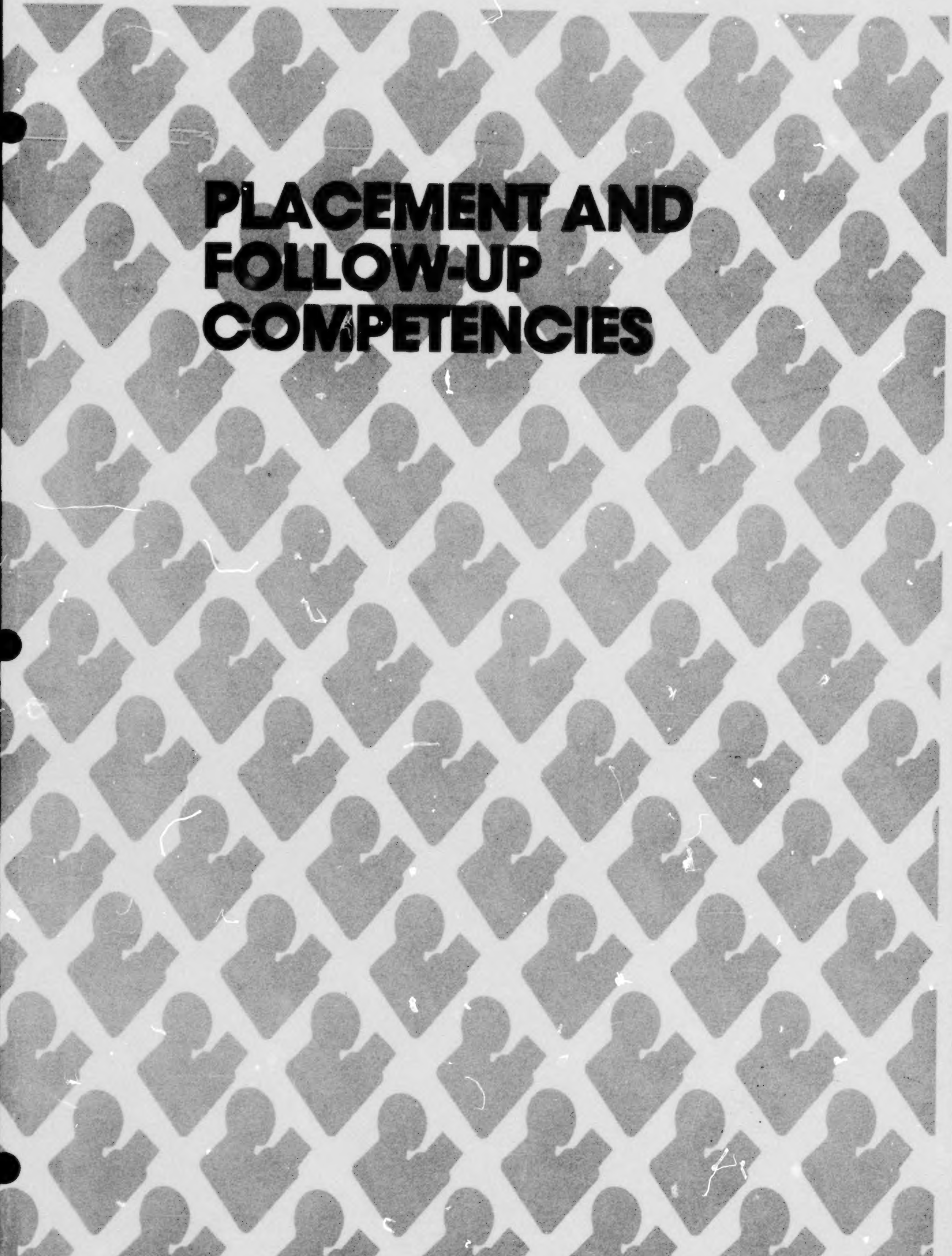
A special consultant in each of the skill areas, after reviewing finalized statements, wrote the narrative and provided some of the exercises contained in this manual. Finally, a draft of the manual was critiqued by ten individuals who are involved with placement and follow-up in Florida, South Carolina, and Illinois. In all, approximately 60 educators have contributed their expertise to the completion of the project.

This manual, *Competencies for Placement and Follow-up Personnel: Workshop and Resource Materials,* contains three main parts in addition to the introduction. The first part gives a description of the competencies identified by and for placement and follow-up personnel as necessary to the performance of their assigned or anticipated duties. Next, there are training activities that specifically address these competencies. A third section provides resource information. The manual will be disseminated to counselors, administrators, and faculty involved with placement and follow-up at community colleges and vocational-technical centers in Florida through a series of regional workshops.

In reviewing this manual, readers should remember that the requirements for the collection of placement and follow-up data change annually, as federal and state requirements change. The recent Vocational Education Data Systems (VEDS) reporting requirements, for example, which provide an additional formal reporting structure, have necessitated alterations in state forms and definitions. These types of external requirements can be expected to change continually, even as the focus on placement and follow-up changes. As a result, placement and follow-up will never be a static field.

This manual is primarily intended to be used in a training context. It was written as a tool for those professionals involved in the utilization of placement and follow-up information at various levels within the institution. As such, the manual includes training activities and descriptive materials that lend themselves to use in workshop sessions. Every effort has been made to address the three identified competency areas needed by placement and follow-up personnel, without presenting either a detailed technical theoretical framework or an oversimplification of responsibilities. It is hoped that this document will be an additional resource that will further the professional development of those interested in the area of placement and follow-up data collection and interpretation.

PLACEMENT AND FOLLOW-UP COMPETENCIES



PROGRAM DESIGN

PLACEMENT AND FOLLOW-UP PERSONNEL WILL. . .

design a follow-up system for the community college in relation to:

- institutional mission
- institutional goals
- program goals
- program competencies
- local business, industry, and governmental employers
- state and federal reporting requirements

To perform the task effectively, the person responsible for placement and follow-up must be proficient or competent in:

1. influencing goal setting, prioritization, and policy making within the institution;
2. utilizing information and resources regarding employment patterns to project and plan for institutional and program needs;
3. consulting with program managers and faculty in the articulation of:
   (a) program goals,
   (b) program competencies, and
   (c) related skills;
4. developing institutional support for placement and follow-up activities by involving each part of the college in the design of the system; and
5. planning for various strategies to address each component of the system (both long range and immediate), consistent with existing state and federal reporting procedures.

RESEARCH

8 PLACEMENT AND FOLLOW-UP PERSONNEL WILL. . .

design, implement, and supervise a system of evaluation of former students to include procedures to:

- select instrumentation
- collect data
- process data
- analyze data
- interpret data
- prepare and present data

To perform the task effectively, the person responsible for placement and follow-up must be proficient or competent in:

1. interpreting basic statistics;
2. utilizing basic research techniques and methodology;
3. performing analyses:
    (a) to understand what has been done with the data and what the data represent,
    (b) to recognize important data vs. unimportant data,
    (c) to identify and analyze trends based on the data, and
    (d) to generalize trends for their effect on each program goal and outcome;
4. designing questionnaires;
5. formulating application systems and analyses;
6. preparing and presenting information based on the data;
7. taking full advantage of computer applications; and
8. developing each professional within the college as a resource for the design, implementation, or supervision of the system.

COMMUNICATION

PLACEMENT AND FOLLOW-UP PERSONNEL WILL. . . 9

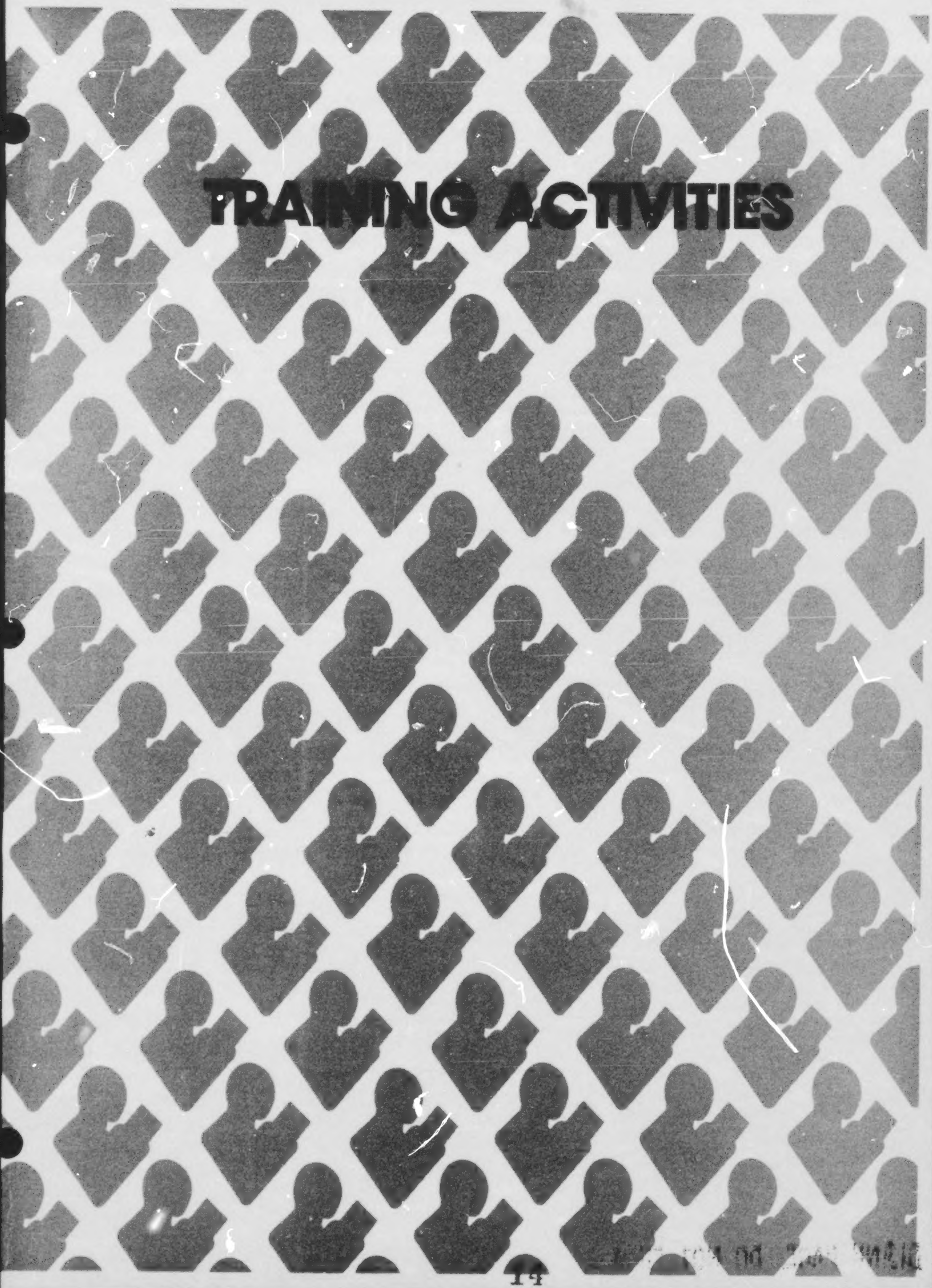
communicate with internal and external publics with regard to:

- needs analysis
- data collection
- dissemination of reports
- implications

To perform the task effectively, the person responsible for placement and follow-up must be proficient or competent in:

1. educating each public about placement and follow-up in a nonthreatening and positive manner;
2. utilizing diplomacy in presenting study results;
3. discriminating the *need to know* and *what is needed* by each public to be addressed;
4. marketing the outcome in a variety of means appropriate for the group being addressed;
5. writing reports;
6. interpreting findings for long-range planning and comparison of current trends;
7. consulting with faculty and managers about the implications of data for their programs in general quantitative ways;
8. educating faculty about methods of formulating qualitative decisions about data related to their programs;
9. developing professional regard, confidentiality, and where necessary, anonymity;
10. writing and speaking clearly; and
11. recognizing the method and strategy appropriate for the public being addressed.

TRAINING ACTIVITIES



ACTIVITIES FOR PROGRAM DESIGN

Activities 1 through 6 are designed to help placement and follow-up personnel attain program design competencies in terms of the following:

- institutional mission
- institutional goals
- program goals
- program and course competencies
- local business, industry, and government employers
- state and federal reporting requirements

As you work through the activities in this section, you may wish to refer to resource materials section I, "Program Design," and II, "Making Effective Use of Educational Follow-up Information."

Feel free to use the backs of the activities pages if you need more space for your answers.

ACTIVITY 1

Read Chapter 1 of "Making Effective Use of Educational Follow-up Information," in resource materials section IV. In the spaces provided below, list the purposes of follow-up and the common problems in using follow-up data. How do these apply to your campus?

Purposes of Follow-up	Application on Your Campus
1.	1.
2.	2.
3.	3.
4.	4.

Problems in Using Data	Application on Your Campus
1.	1.
2.	2.
3.	3.
4.	4.

ACTIVITY 2

Study your college's mission statement contained in the college's catalog and analyze it as it pertains to placement and follow-up. In the space provided, write down those segments of the mission statement that relate to degree programs, community service, job placement, and follow-up.

Mission Statement

Relevant Segments

For Degree Programs

Academic (transfer) studies

Vocational studies

For Community Service

For Job Placement

For Follow-up

ACTIVITY 3

Study your college's statement of institutional goals. Are they process goals? ______ Outcome goals? ______ If they are not outcome goals, create, in conjunction with several of your colleagues, a list of appropriate institutional goals stated as outcomes.

Institutional Goals

1.

2.

3.

4.

5.

6.

7.

8.

ACTIVITY 4

Select a program of study offered at your institution. In the space provided, list the program's goals.

Program

Goal Statements

1.

2.

3.

4.

5.

6.

7.

8.

ACTIVITY 5

For one of the vocational programs at your college, assess the degree to which entry-level communication and computation competencies have been defined and measured, both at the point a student enters the program and at the point the student enters employment or transfers to an institution of higher education. Also assess the degree to which the vocational skill competencies have been defined and measured at the point at which a student exits the program and enters the occupation for which he or she was trained.

To indicate your assessment on the following Program Evaluation Report, check the appropriate box in each section. Zero (0) indicates no definition or measurement. Two (2) indicates complete definition and measurement.

NOTE: The Program Evaluation Report is usually completed by the program manager, who is the supervisor for the program.

PROGRAM EVALUATION REPORT

Program Evaluated

Communication and Computation Status Rating

Program Entry Communication and Computation Competencies Defined and Measured

	0	1	2
Communication			
Computation			

Employment Entry or Entry into Higher Education Competencies Defined and Measured

	0	1	2
Communication			
Computation			

Skill Competency Rating—Skills are defined as those manipulative abilities associated with a particular vocational training program.

Employment Skill Competencies Defined and Measured

0	1	2

ACTIVITY 6

Study the Program Evaluation Report that you prepared in Activity 5. List the specific performance outcomes or competencies needed for completers. In the first column, indicate the skills or competencies to be attained by the completer. In the second column, indicate *how* the completer will attain each skill or competency.

Skills/Competencies	Course/Setting in Which Acquired
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.
7.	7.
8.	8.
9.	9.
10.	10.

ACTIVITIES FOR RESEARCH

Activities 7 through 10 are designed to guide the "nonresearcher," the program manager or counselor, through the steps necessary to arrive at appropriate placement and follow-up statistical data. Several of the activities found in this section appear in Joyce and Marvin Fielding's publication, *Conducting Follow-up and Follow-through Programs.*

In order to design a system for evaluating former students, the individual should have competencies in the following areas:

- placement and follow-up instrumentation
- research methodology
- questionnaire development
- basic statistics
- analysis and interpretation of data
- computer applications
- presentation of data

As you work through the activities in this section, you may wish to refer to resource materials section II, "Research."

Feel free to use the backs of the activities pages if you need more space for your answers.

ACTIVITY 7

Although the *type* of information that you wish to gather will play a major part in the decision as to which method you use to gather your follow-up information, you should have an understanding of the benefits and problems associated with different methods. In the spaces provided, list the advantages and disadvantages of the three most commonly used information-gathering methods: mailed questionnaire, telephone interview, and personal interview.

Several, but not all, of the elements you should consider in this analysis are the following:

- cost
- time involved for professional staff
- time involved for clerical staff
- completeness of information
- accuracy of interpretation of questions asked
- interpretation or analysis of information gathered
- population to be surveyed

MAILED QUESTIONNAIRE

Advantages **Disadvantages**

TELEPHONE INTERVIEW

Advantages **Disadvantages**

PERSONAL INTERVIEW

Advantages **Disadvantages**

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ACTIVITY 8

Listed below are some specific examples of needed follow-up information. Read each example and decide which of the three methods analyzed in Activity 7 would be the best method of gathering that type of information. Why? Write out your own answers in the space provided.

1. You have taken a new position as a job placement coordinator in a small, rural community, and your supervisor has asked you to do a brief follow-up of 75 students who completed an occupational program four years ago. Basically, the information you must collect is whether or not the students are employed. If they are employed, in what type of position? The information is needed for a state report that is due in three weeks. The school has not contacted these students since they graduated.

Method selected

Why?

2. The school in which you are employed as a placement coordinator has a very successful secretarial program. Placement of the 50 or so graduates each year has been high—98 percent. The faculty is in the process of curriculum revision and is considering substituting machine transcription for shorthand, which has become (more or less) a "wash-out" course. The faculty has asked you to advise them on whether this change would affect the ability of students to secure employment.

Method selected

Why?

3. This past year, all vocational students were required to take "Employment Seminar," a one-semester course in job-seeking skills. You worked closely with the faculty, trying to get students to build better work attitudes and habits, especially regular attendance and promptness in completing assignments. You would like to know whether the 200 students who completed this seminar last year, and who have been employed at least six months, will receive a higher ranking on work attitudes from their employers than did the previous year's graduates (who did not take employment seminar class) when they had been working approximately six months.

Method selected

Why?

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ACTIVITY 9

Although each of the three methods analyzed in the previous two activities is useful and appropriate in specific situations, most of the information that you will be responsible for gathering will probably be collected by using a mailed questionnaire.

This activity will *not* give you the skills you need to develop a really good instrument—but it will help you do a better job of evaluating the kinds of questions contained in many of the existing follow-up questionnaires that are found in placement literature and that you might consider adapting for your own use.

A good questionnaire item is worded in a nonambiguous manner and does not require a lot of processing and interpretation to determine what information is being asked of the respondent.

Below are several questions, each of which contains a given weakness. You are to identify the weakness in the question as stated and then restate the question so as to better elicit a more reliable, valid, and objective response.

1. What is the value of your house?
Weakness

Suggested revision

2. What is your age?
Weakness

Suggested revision

3. What work are you doing now?
Weakness

Suggested revision

4. What is your salary?
Weakness

Suggested revision

5. How did you get your first job?
Weakness

Suggested revision

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ACTIVITY 10

Suppose you have conducted a placement study of former students in business administration at your community college. You have determined that four months after they left the college:

- 20 percent of the graduates have jobs in their field of study
- 30 percent have jobs unrelated to their field of study
- 30 percent are continuing their education
- 10 percent are unemployed and not in school
- 10 percent cannot be found

On the basis of this information, answer the following questions.

1. Can the results be generalized to all former students in the survey? Why or why not?

2. How would you graphically display the information given?

3. What would you conclude about the graduate placement record for business administration students?

4. What recommendations would you make on the basis of your conclusions in question 3?

5. What strategy should be implemented to communicate the results of the study to the following audiences?

The business administration faculty

The administration of the college

The public

ACTIVITIES FOR COMMUNCIATION

Activities 11 through 22 are designed to provide a structure for guided improvement of skills in communicating with both internal and external publics. Special emphasis is placed on: 37

- needs analysis
- data collection
- dissemination of reports
- implications

As you work through the activities in this section, you may wish to refer to resources materials sections II, "Research," and III, "Communication."

Feel free to use the backs of the activities pages if you need more space for your answers.

ACTIVITY 11

Examine the communication situations you encounter in your professional position. Analyze each of these situations in relation to different communication models and identify any potential for breakdown in the process that this analysis reveals. Be certain that your analysis includes attention to your attempts to improve listener/reader responses as well as efforts to improve your skills as a "transmitter." Keep your identification of communication situations for use in future activities.

Communication Situation	**Breakdown Area**
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.

ACTIVITY 12

Diagnose your own relative strengths and weaknesses in communication skills. Let the theoretical models guide you in determining the components of such a diagnosis. Use your personal job tasks to identify which communication skills are the most important *for you* in your unique situation. In your diagnosis, do not overlook the importance of feedback from communication receivers. Also, be willing to call on the expertise of communication specialists at your institution. Use the results of this diagnosis to design a self-improvement program. Keep in mind the importance of immediate self-help, along with a program of continuous personal growth. If your institution has a professional growth program, try to include this schedule of activities in it.

Communication Strengths

1.

2.

3.

4.

5.

Communication Weaknesses

1.

2.

3.

4.

5.

ACTIVITY 13

Using the list of communication situations you prepared for Activity 12, organize a communication planning file for your placement and follow-up responsibilities. Use whatever file organization techniques you find to be effective; 4" × 6" or 5" × 8" cards are suggested. Using a separate card or page for each event, try to identify the specific, predictable communication situations you face in your job responsibilities. You may now be able to think of more communication situations than you did in connection with Activity 12; if so, be certain to include the additional ones in your file. For each situation, state the probable reading or listening audience(s). With the receivers of the communication in mind, make notes in the file to remind you of specific information that will be important for those readers/listeners. Also note any specific communication techniques that seem especially appropriate for the situation.

ACTIVITY 14

Select a situation in which you believe you were inadequately informed or in which you, as a receiver, were negatively affected by poor communication. Try to analyze the situation to determine the cause of the communication failure. Do your best to be objective about your role, if any, in the failure. What could be done in the future to improve the probability of achieving success in a similar communication situation?

Description of Situation

Steps toward Improvement of Communication Efforts

ACTIVITY 15

Repeat Activity 14, but in this instance select a situation in which you were the sender or transmitter and were dissatisfied with the success of your communication efforts.

Description of Situation

Steps toward Improvement of Communication Efforts

ACTIVITY 16

Experiment with the language behavior of people. Look at the words listed below and write your reaction to or definition of them. Compare your responses with the responses of others in your group. Analyze the implications for you of the diversity of reader/listener responses as you seek to communicate with various publics about placement and follow-up data and information.

You may wish to engage in some additional experimentation of your own design. For example, what happens if you give the list orally and there is confusion between hearing "red" and "read." If you write the list on the chalkboard, what differences, if any, develop in reaction to "red" or "Red"?

Word	Reaction or Definition
color	
animal	
red	
democracy	
placement and follow-up	

ACTIVITY 17

The terms listed below are drawn from reports that you deal with regularly. Define each in the space provided.

Term	Definition
certificate of training	
completion award	
occupational program	
postsecondary technical	
program completer	
program leaver	
program length	
program of study	
transfer	
undecided	
VEDS	
withdrawal	

ACTIVITY 18

Review the terms you defined in Activity 17. In an effort to better understand the communication implications of language choice, consider the following:

1. How many of those terms can you identify and define without using resource material? (A glossary of placement and follow-up terms appears at the end of this manual.)

2. How many of those terms could you reasonably expect your professional colleagues to identify and define?

3. How many of the publics to whom you will provide data and information could be expected to know and understand those terms?

4. What implications does this analysis have for you as you strive to improve your professional communication skills?

ACTIVITY 19

A. DESCRIPTION OF TASK

Using a set of tabulated results from an initial six-month follow-up of the graduates of a one-year postsecondary certificate program in secretarial science, develop a plan for using this information. The plan you develop must include the following elements:

1. *Purpose*—The workshop participants are to form three groups, with each group assigned two purposes for which information from the follow-up study could be used (see section B).
2. *Questionnaire Items Related to Purpose*—Read the tabulated follow-up (see section C) and decide which questions would relate to that purpose.
3. *Target Group(s) or Person(s) Who Need This Information*—Discuss and decide who should be informed of these data, either to take action or to be kept current. Possibilities include: administration, teachers, placement personnel, students in training, program advisory committee members, placement advisory committee members, and the general public.
4. *Method of Dissemination*—Discuss and decide how you would disseminate the information to each target group listed. This could include, but is not limited to: written reports, presentations to committee meetings, brochures, news releases, programs for special interest groups, and informal one-to-one conversation.

Record your own plan on the planning chart provided in section D. When you have completed this, exchange charts with another participant in your group and check for completeness. Then the total group should reconvene and share plans.

B. GROUP-ASSIGNMENT PURPOSES

Group 1	Group 2	Group 3
Evaluate the effectiveness of the instructional program.	Evauate the effectiveness of the placement program	Determine occupational patterns (work history) of graduates as this relates to: (1) job stability (2) job mobility
Identify students in need of additional educational or placement services.	Identify students in need of additional educational or placement services.	Identify students in need of additional educational or placement services.

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C. SUMMARY TABULATION OF DATA

This tabulation is from an initial six-month follow-up study of the graduates of a one-year postsecondary certificate program in secretarial science. The number of graduates is 45. By phoning the few students who did not return the mailed questionnaire, a 100 percent response was secured. Open-ended questions that appeared in the questionnaire are shown, but the responses are not included, since they were not tabulated.

---

1. **After you left this vocational program, did you seek full-time employment? (30 or more hours per week)**

   / 35 / yes
   / 10 / no

2. **If you did not seek full-time employment when you left this vocational program, indicate the reason.**

   / 5 / continuing in this school
   / 2 / expected to enter another school
   / 1 / homemaker or about to be married
   / 0 / physical or other handicap
   / 0 / not interested in a job
   / 1 / expected to enter military service
   / 1 / only wanted to work part-time (less than 30 hours per week)

3. **Did you seek part-time employment (less than 30 hours per week) when you left this vocational program?**

   / 8 / yes
   / 5 / no

4. **If you sought part-time employment, instead of full-time employment, when you left this vocational program, indicate the reason.**

   / 2 / expected to enter another school
   / ___ / physical or other handicap
   / ___ / expected to enter military service
   / 2 / continuing as a full-time student
   / 1 / homemaker or about to be married
   / ___ / not interested in a full-time job
   / 3 / unable to find a full-time job

5. **How many full-time jobs (30 or more hours per week) have you held since you left this vocational program?**

   / 12 / none
   / 27 / 1 full-time job
   / 6 / 2 full-time jobs
   / ___ / 3 to 5 full-time jobs
   / ___ / 6 or more full-time jobs

6. **If you got a full-time job when you left this vocational program, what was your job? (responses not tabulated)**

7. **How closely did your first full-time job (30 or more hours per week) after leaving this vocational program relate to the training you received?**

   / 27 / I was employed in the occupation for which I was trained by this vocational program
   / 3 / I was employed in a related occupation.
   / 3 / I was employed in a completely different occupation.

8. Did this vocational training program adequately prepare you for your first full-time job after leaving this training?

   / 33 / yes
   / 0 / no

9. What was your beginning hourly wage on your first full-time job after leaving this vocational program?

/ __ / $1.56 or less per hour
/ __ / $1.60 to $1.99 per hour
/ 20 / $2.00 to $2.49 per hour
/ 10 / $2.50 to $2.99 per hour
/ 3 / $3.00 to $3.99 per hour
/ __ / $4.00 or more per hour

10. How did you get your first full-time job after leaving this vocational training?

/ 5 / I got the job myself.
/ 5 / My family or friends helped me get the job.
/ 20 / The job placement services provided by the school helped me get the job.
/ 2 / The state employment service helped me get the job.
/ 1 / A private employment agency helped me get the job.
/ __ / Other (specify) ______________________________

11. What is the most you have earned on a full-time job since leaving this program?

/ __ / $1.59 or less per hour
/ __ / 1.60 to $1.99 per hour
/ 15 / $2.00 to $2.49 per hour
/ 14 / $2.50 to $2.99 per hour
/ 4 / $3.00 to 3.99 per hour
/ __ / $4.00 or more per hour

12. If you have held two or more full-time jobs (30 or more hours per week) since you ended this vocational training, check one box below.

/ 4 / I was trained in school for my last job.
/ __ / My last job was somewhat related to this vocational training.
/ __ / My last job was not at all related to this vocational training.

13. Indicate below the location of your present or most recent full-time employment. (responses not tabulated)

14. If you are presently working, what is your job? (responses not tabulated)

15. What wages are you presently earning?

/ __ / $1.59 or less per hour
/ __ / $1.60 to $1.99 per hour
/ 15 / $2.00 to 2.49 per hour
/ 14 / $2.50 to $2.99 per hour
/ 4 / $3.00 to $3.99 per hour
/ __ / $4.00 or more per hour
/ __ / I am unemployed.

16. What is your current employment status?

/ 40 / I am employed.
  / 35 / full-time (30 or more hours per week)
  / 5 / part-time (less than 30 hours per week)
/ 4 / I am unemployed.
  / 3 / but looking for work
  / __ / and not looking for work
/ 1 / I am in the military service.

17. As best you know, what type(s) of job placement service(s) were provided by the school and the vocational program in which you were enrolled?

/ 40 / A school placement service helped students find jobs.
/ 10 / Vocational teachers helped place students in jobs by making referrals.
/ __ / Other (specify) ______________________________
/ 5 / School had no placement services.

18. After you got your first job (full-time or part-time) following this vocational training, have you ever again used any of the job placement services provided by the school or this vocational program?

/ 5 / yes
/ 37 / no

If yes, check the service(s) you have used since getting your first job.

/ 5 / service provided by school placement office
/ 2 / vocational teacher assistance

19. Did you enroll in this vocational program with the specific purpose in mind of getting skill training in order to get a job in this field?

/ 43 / yes / 2 / no

20. Were you satisfied with the vocational training you received in this program?

/ 45 / yes / 0 / no

21. Would you recommend this vocational program to others?

/ 45 / yes / 0 / no

22. Since you left this vocational program, have you been enrolled in any additional education program(s)?

/ 7 / yes / 38 / no

If yes, check the type(s) and purpose(s) of educational programs below:

/ 5 / general education program(s)
  / 2 / to raise my general education
  / 3 / informal, noncredit course(s)
/ 5 / vocational program(s)
  / 5 / to upgrade the vocational skills previously learned in this program
  / / to learn a new occupation

23. If you did enroll for additional education after leaving this vocational program, have you received (or do you expect to receive) one or more of the credentials from the following list? If so, which one(s)?

/ / certificate (type) ______ / / 4-year college degree
/ / diploma (type) ______ (major) ______
/ 5 / 2-year associate degree / / other (specify) ______
(major) ______ / / none

24. Are you now enrolled in a vocational program?

/ 3 / yes / 42 / no

25. Are you now enrolled in any educational program(s) other than vocational?

/ 3 / yes / 42 / no

26. Are you interested in getting more vocational training?

/ 10 / yes / 35 / no

27. Are you interested in getting more general education?

/ 15 / yes / 30 / no

28. If you are interested in getting more training of any kind, indicate the type you are interested in:

(responses not tabulated)

29. What specific things about this vocational program have you found to be most useful to you in your present job?

(responses not tabulated)

30. What specific things about this vocational program have you found to be the least useful to you in your present job?

(responses not tabulated)

31. Based on your experiences, what suggestions do you have for improving this vocational program?

(responses not tabulated)

D. PLAN FOR USING FOLLOW-UP INFORMATION

Purpose	Questionnaire Items Related to Purpose (list by number)	Target Group (persons who would need this information)	Method of Dissemination

ACTIVITY 20

For this activity you are to assume that you are preparing for a meeting with the secretarial science department chairperson and the faculty. You want to discuss with them the results of the follow-up study, given in Activity 19, and you need to think through the meaning of the data and put together your own conclusions and recommendations related to this program and the job placement of secretarial science graduates.

The workshop participants are again to form three groups to discuss the results of the follow-up study and develop some tentative conclusions and recommendations to present at the meeting. Use the following questions as a discussion guide. When you have completed this part of the activity, reconvene as a group and have each subgroup report its conclusions.

1. What conclusion would you draw about the employment patterns of these students?

Any recommendations?

2. What conclusions would you draw about the salaries they are earning? Are there any indications of advancement?

Any recommendations?

3. What conclusions would you draw about the quality of the instructional program?

Any recommendations?

4. What conclusions would you draw about the job placement program?

Any recommendations?

5. What type of graphic presentation of this data would you recommend for use in forthcoming written reports?

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ACTIVITY 21

The following four questions are excerpted from the state of Florida's placement and follow-up reporting forms. Keeping in mind that the use of information to bring about change is an expected outcome of follow-up efforts, answer these questions on the basis of your findings on Activities 19 and 20.

1. What findings or conclusions have resulted from the placement and follow-up evaluation of students who completed the program?

2. In light of the findings or conclusions, what changes are being considered and/or have been made in the expected outcomes of the programs?

3. In light of the findings or conclusions, what changes are being considered and/or have been made in the design and implementation of the instructional support components of the program?

4. Are there requirements of law or regulations external to the college that inhibit needed program modifications? If so, please explain.

ACTIVITY 22

There is sometimes a tendency for follow-up to be regarded as only a one-shot survey form, which is mailed to former students, tabulated, reported, and then filed to gather dust. Follow-up is a much broader activity than that and includes both formal and informal contacts with former students and their employers. These contacts form the basis for follow-through services. Follow-through is the action that results from follow-up.

Review the five general methods of providing follow-through services listed below and discuss each, using these questions as a guide:

- Whom would you need to contact for information?
- How would you make this contact and gather the information?
- When would you do this?
- What kinds of action might you take?
- What other people might need to be involved

METHODS OF PROVIDING FOLLOW-THROUGH SERVICES

1. **Counsel** students about initial work adjustment problems.

2. **Refer** students to additional career preparation, as needed or desired.

3. **Refer** students for additional job placement services for career advancement or relocation, as needed or desired.

4. **Assist** employers in arranging for educational services to up-grade or up-date skills of employees.

5. **Assist** employers in identifying existing jobs that might be restructured to utilize entry-level skills of graduates.

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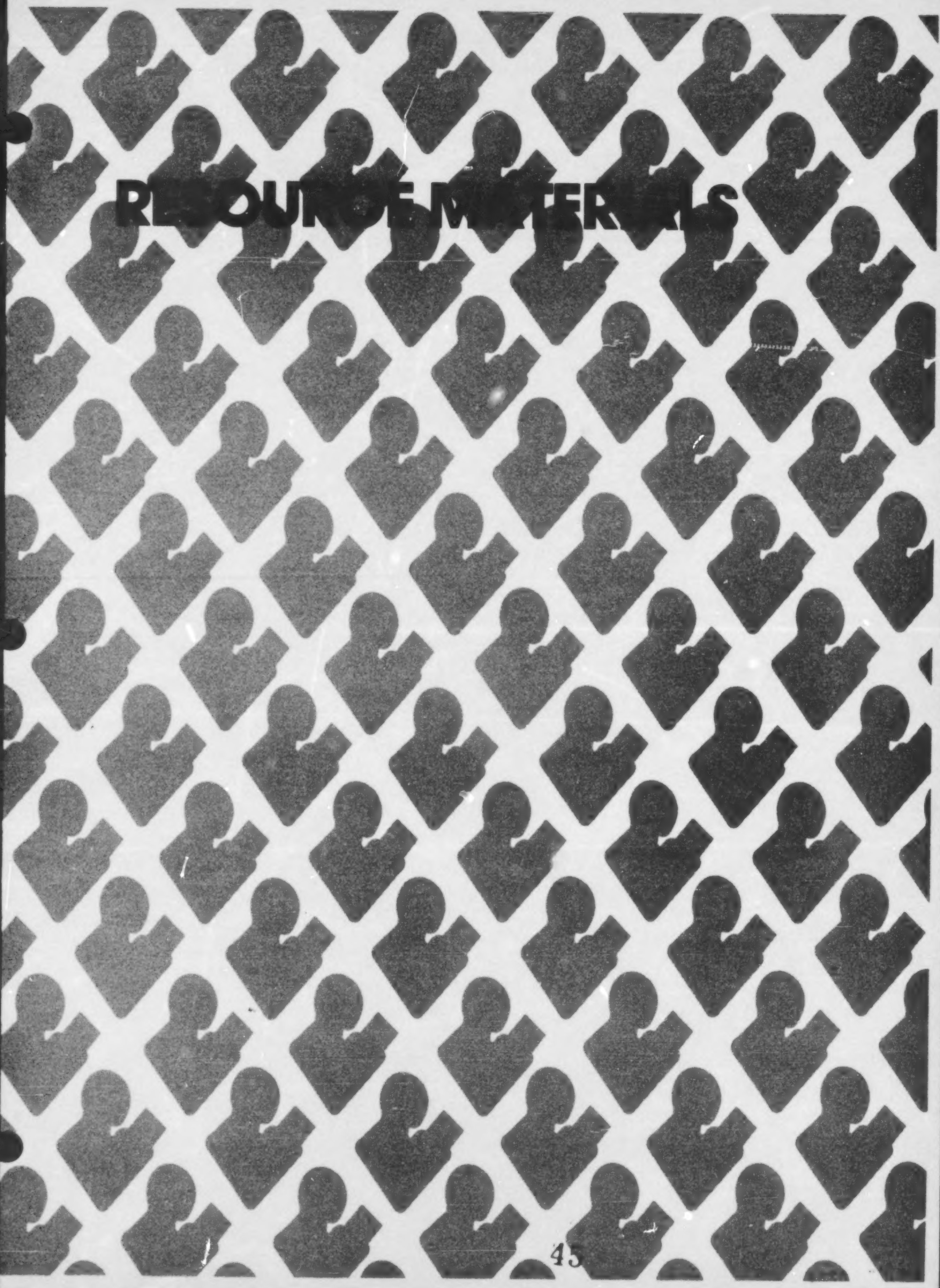
RESOURCE MATERIALS



SECTION I
PROGRAM DESIGN

Prepared by:
Barton R. Herrscher

THE NEED FOR FOLLOW-UP SYSTEMS

Information from and about former students is important in the evaluation of college programs. In recent years follow-up systems have become both common and widespread. This enthusiasm can be traced directly to state governing boards, which require colleges to submit annual reports containing such information. The governing boards in turn are complying with the 1968 Vocational Education Amendments, which require that colleges receiving federal funds report the number of students who have completed vocational-technical programs and have found employment in the fields for which they were trained. Thus, federal and state mandates are satisfied by means of follow-up activities, but the ultimate objective of such endeavors is the improvement of educational programs.

Nationwide, many community colleges currently do not have comprehensive, flexible, tested, and validated student follow-up systems. Without such systems, it is difficult for a college to be truly responsive to community needs as reflected in existing job markets and the interests of the citizenry.

INSTITUTIONAL MISSION

Every organization has a mission, which determines its goals, objectives, and ultimately, the processes by which the mission is to be accomplished. A college's mission statement is a public declaration of its reason for being. It serves to validate the existence of the institution.

The mission of community colleges centers on the concept of service to the community. The colleges have thrived on the commitment to this concept, which has guided their evolution over the past half-century from transfer-oriented junior colleges, to comprehensive community colleges, to open-door colleges, to the present day institutions for community-based, performance-oriented postsecondary education.

This evolution of the American community college is in response to societal changes. Rapid population growth and the egalitarian concept of equality of educational opportunity have contributed to the colleges' phenomenal popularity. The aspirations of the American worker have risen in light of the advantages offered through advanced education. Vocational education has been the prime force in the growth of the community college, many of whose students have job preparation as their educational objective. The mission of the community college is focused here.

It is important that the statement of institutional mission found in the college catalog adequately represents the college's real-world activities. The goals of the college are derived from its mission statement, and all its policies and practices are in turn derived from those goals.

Moving from a consideration of institutional mission to goals, it might be noted that a prescriptive definition of performance-based education must include statements of instructional outcomes at the following four levels of specificity:

Level 1—institutional goals (very general)
Level 2—program goals
Level 3—course competencies
Level 4—unit competencies (very specific)

INSTITUTIONAL GOALS

The goals of the college give direction to all endeavors undertaken within the institution. Defining goals and stating them publicly are essential to ensure that the college's programs have the impact on the students that is intended. Upon close scrutiny it might be found that despite clear intentions and well-defined goals, the intended impact is not being achieved. More often, however, colleges lack reliable information on the impact of their programs and continue to operate on the assumption that the programs are having the desired impact.

Goal statements are of two types: process goals and outcome goals. Process goals state what the college will do, the processes of the institution; for example, "to offer a variety of vocational-technical programs." Outcome goals state the competencies to be attainted by students, or the outcomes resulting from the processes of the institution; for example, " The student will demonstrate a level of communications skills consistent with his or her occupational requirements."

It is important that institutional goals be stated as *outcomes* as well as *processes*. Only outcome statements can give the direction necessary to ensure that the desired impact has been achieved. A review of community college catalogs would reveal that most contain process goals only.

PROGRAM GOALS

Each instructional program of the college is guided by a set of goals. These should be outcome goals and should be publicly stated in writing. If they are not, the faculty of each program area should develop such a set of goals.

PROGRAM AND COURSE COMPETENCIES

Publicly stated performance-based program outcomes, clearly identified evaluation criteria, and the various concomitants of a performance-based curriculum are required to guide the educational program. Placement and follow-up efforts must be based on such instructional outcomes at the program level. Each program should develop a listing of specific statements that identify the expected outcomes of program completers in general and of each student in particular.

This situation should be addressed in terms of both competency statement and corresponding course delivery. Each course within a program of study, and the units that comprise the course, must have competencies to be attained by students specified in terms of outcomes—the skills, knowledge, or attitudes resulting from the instructional activities. These, like the program goals, give guidance to the college's placement and follow-up efforts.

THE IMPLEMENTATION AND SUPERVISION OF FOLLOW-UP SYSTEMS

Implementation and supervision of follow-up systems are closely intertwined and are jointly achieved through the following multiple-step process.

GENERATING HUMAN AND MATERIAL RESOURCES

1. In response to a perceived need for more and/or better follow-up data, a *follow-up task force* representing a cross-section of the campus community is appointed by

the president. The task force is charged with overseeing all aspects of the follow-up process and is allocated the resources needed to fulfill its mission.

PLANNING THE FOLLOW-UP PROCESS

2. An *implementation plan* is developed that includes a rationale, objectives, strategies, responsibilities, a time schedule, and an evaluation.

The following are examples of questions that should be addressed by placement and follow-up personnel in planning the follow-up process:

At what rate of placement should the college become concerned; that is, what is the minimal acceptable placement rate for each program?

What are the minimal standards of performance for each program objective in operational terms?

What is the overall five-year plan or system for conducting placement and follow-up studies?

Who has responsibility, in each case, for implementing recommended changes and monitoring their impact?

How are recommended changes implemented systematically in the program areas?

How do placement and follow-up personnel interface with other college personnel?

IMPLEMENTING THE FOLLOW-UP PROCESS

3. A *rationale* that details the parameters of the endeavors and the reasons that follow-up should be undertaken is developed.

4. The *objectives* to be achieved are specified in terms of both processes and outcomes.

5. *Strategies*, in general terms, are listed.

6. *Responsibilities* for the many tasks involved in such a massive endeavor must be delineated. Several people will be directly involved in the follow-up process in key roles, and many more will have supporting roles.

7. A *time schedule* that specifies "what is to be done," "by whom," "in what time frame," and "with what resources" is developed. The schedule is reviewed periodically and revised as needed.

8. *Evaluation* of the entire process is an ongoing operation.

SUPERVISING THE FOLLOW-UP PROCESS

9. *Cost monitoring* is included as an essential element of the supervision process. The appropriate campus officer should be assigned this important responsibility.

10. *Use monitoring* is specified in writing and overseen by the appropriate campus officer. Data utilization is carefully documented.

11. *Survey methodology* is reviewed.

12. *Data interpretation* is undertaken.

13. *Dissemination of information* is conducted.

14. *Information use* is the capstone of the entire process.

Where change is required for program improvement (as evidenced by the results of follow-up studies), such change is a must. The supervisor of the follow-up system becomes a change agent as s(he) assists colleagues in using the information to improve curriculum and instruction.

SUMMARY

The ultimate objective of follow-up activities is the improvement of a college's educational programs. Thus, placement and follow-up personnel need to attain competencies in program design that will enable them to develop strategies for institutional renewal. The design of a program should be determined by local needs, with consideration given to the stated institutional mission and goals and to program and course goals and competencies. Placement and follow-up efforts must be based on instructional outcomes at the program level to ensure that the college is responsive to community needs, and that its programs have the desired effect.

SECTION II
RESEARCH

Prepared by:
Mantha Vlahos Mehallis

PLACEMENT AND FOLLOW-UP INSTRUMENTATION

For a placement and follow-up program to be viable, a broad data base is paramount. Two of the methods frequently used to collect placement and follow-up data are interviews and surveys. The following material explains these techniques and the advantages and disadvantages of each.

PERSONAL INTERVIEWS

Personal interviews allow the investigator to ask the greatest number of questions and to obtain the optimal amount of direct information. The interviewer must use a guide such as the following one with a common questionnaire. The guide lists the procedural steps the interviewer must follow.

EXAMPLE

1. At least one and one-half weeks before the proposed interview, call to set a time for the interview.
    a. Read aloud the introductory paragraph (prepared by the investigator for all interviewers) to introduce yourself and the study.
    b. Establish the date, time, and location of the interview.
    c. If the person does not answer, call back at least five times at different hours of the day and evening before discarding the name of the respondent from the sample.
2. Establish an overall schedule for the entire interview process.
3. Call each interviewee the day before the interview to confirm the date, time, and place.
4. Arrive for the interview approximately ten minutes before the appointed time.
5. Introduce yourself and the project study to the interviewee.
6. Ascertain that the interview will be conducted in an area free from outside interference such as other people or phone calls.
7. Conduct the interview.
8. Make farewell remarks and thank the interviewee.
9. Exit.

The entire interview should not take more than thirty minutes from introduction to exit. Some of the disadvantages of personal interviews include the expense of finding and training interviewers and the high cost of gasoline, which may make the personal interview a thing of the past. The more interviewers involved in the project, the faster the interviews will be completed. However, the more people involved, the more chance for interviewer bias or personnel conflicts and the less control maintained by the principal investigator.

TELEPHONE INTERVIEWS

The telephone interview is an excellent technique for a placement and follow-up study. The investigator should identify whether the phone numbers of all former students are to be called, or only a random sample.

Interviewers must be selected and trained to use an interview guide and a common questionnaire. The interview should not last more than five minutes, and questions must be kept very short to stay within the interviewee's attention span. Response options must also be kept short, to three-response items such as *yes-no-maybe* or *excellent-average-poor*. With well-trained interviewers, a large number of telephone interviews can be conducted at relatively low cost.

The calls should be made at varying times of the day, evening, and weekend in order to accommodate interviewees' varying work schedules. The investigator should establish a time schedule and incorporate it into the interviewer's guide.

One disadvantage of the telephone interview technique is the fact that the sample automatically excludes persons without telephones, individuals with unlisted phone numbers, and those who have moved out of the immediate service area. Another consideration is whether enough telephones are available for the interviewers to use.

Telephone interviews are less threatening than personal interviews and less expensive when most former students remain in the same geographic area; however, establishing credibility with the interviewee is more of a problem. One solution is to send a letter to the prospective interviewee in advance so that s(he) will be aware of the phone call's legitimacy.

MAIL SURVEYS

The mail survey is most appropriate if only one person has full responsibility for researching placement and follow-up. With sufficient funds to cover paper, mail-out envelopes, return envelopes, printing, and postage, one person can conduct a mail survey.

Even though postage has risen drastically in the last few years, the mail survey is still relatively inexpensive for the return it brings. There is no need to depend on others to conduct interviews accurately. Also, the impersonality of the mail survey enables respondents to be more candid in their responses.

The questionnaire itself should not take more than ten minutes to complete. The ideal size for a placement and follow-up questionnaire is one page, two sides. Including all the questions on one piece of paper facilitates the mailing and enhances the probability of return.

An introductory letter on the college's official letterhead stationery should accompany the questionnaire. The letter should state the purpose of the survey simply, assure the respondent that his or her name and individual responses will be kept anonymous, and indicate the deadline date for returning the completed survey. Addressing each letter in the name of the former student will encourage return. It is very important in placement and follow-up studies to be able to identify respondents so that their questionnaire responses can be matched to their demographics and to future survey responses.

Students tend to respond to questionnaires from their former college, especially when the introductory letter is signed by the president or the department head for their respective majors. Former students should be given one week to ten days to complete and return the surveys. More time will not result in greater returns. A second mailing should be made as a reminder and to boost the returns.

Approximately two-thirds of the questionnaires should be returned for an adequate response. This rate of return enables generalizations to be made from respondents' answers to all former students being investigated. The responses should be converted from frequencies to adjusted percentages. This is done by omitting nonresponses and determining the percentage distribution obtained on the basis of the 100 percent who did respond.

There are some disadvantages to the mail survey. Its success depends on the accuracy of former students' addresses and on the students' willingness to cooperate. Cooperation can be enhanced by enclosing a stamped, self-addressed envelope with each questionnaire. This step can be facilitated by using #10 envelopes for the mail-out with #9 envelopes, which fit inside the #10s without having to be folded, for the return. Money can be saved by using bulk-rate mail for the mail-out (contact your local post office for particulars), and by affixing special rate postage stamps on the return envelopes. That way, the post office will charge postage only for the envelopes actually returned.

QUESTIONNAIRE DESIGN

Before an appropriate questionnaire can be selected or developed, the primary purpose and secondary objectives of the study must be established and agreed on by the persons involved.

EXAMPLE

Primary Purpose I:

To evaluate the appropriateness of the college program in preparing individuals for entry into upper-division university programs.

Secondary Objectives:

I.A. To determine the percentage of graduates who enroll in upper-division universities in major fields related to their community college major.

I.B. To determine the academic progress of graduates in upper-division programs in terms of grade point average, number of credits awarded, retention/attrition, and number of semesters taken to graduate.

I.C. To determine graduates' attitudes toward the adequacy of the community college program.

Primary Purpose II:

To evaluate the college program's adequacy in preparing graduates for the world of work.

Secondary Objectives:

II.A. To determine the percentage of graduates who obtain jobs in the same field as, or a field related to, their community college major.

II.B. To determine employer satisfaction with the graduates' performance on the job.

II.C. To determine the job retention rate of employed graduates.

II.D. To determine the promotion rate of employed graduates.

II.E. To determine the reasons for unemployment among graduates.

II.F. To determine the strengths and weaknesses of the program.

After all persons responsible for the placement and follow-up study agree on the primary purpose and the secondary objectives, the latter can be structured as research questions. This is done by restating the objectives in interrogatory form.

EXAMPLE

Secondary Objective I.A.:

To determine the percentage of graduates who enroll in upper-division universities in major fields related to their community college major.

becomes

Research Question I.A.:

What percentage of graduates enroll in upper-division universities in major fields related to their community college graduation major?

Remember that research questions are always stated as interrogatives. It is also very important to ask questions about former students who did not graduate (withdrawals) as well as about graduates who did not attend an upper division university or obtain a job. These individuals can provide some very important data with regard to the adequacy or appropriateness of the program.

80

SELECTING AN INSTRUMENT

After the research questions are established, the investigator should review the existing placement and follow-up literature and contact other colleges to find out if there are existing survey instruments (questionnaires) that are appplicable. Whenever possible, the investigator should avoid "rediscovering the wheel."

Only questionnaires whose validity and reliability have been established through pilot testing and whose items directly relate to the research questions should be used. If an existing instrument is used, the source should be referenced in the final report.

Persons unfamiliar with questionnaire design have a tendency to begin by listing questions for the questionnaire. The appropriate way to design a questionnaire, however, is to first establish the primary purpose and secondary objectives for the study, then to design the research questions, and, finally, to devise several questions (questionnaire items) pertaining to each research question. The investigator should be able to take each item appearing on the questionnaire and point to the specific research question, the secondary objective, and the primary purpose it helps to fulfill.

EXAMPLE

Questionnaire Item: How many times did you change jobs in the past year?

Research Question: What is the job retention rate of employed graduates?

Secondary Objective: To determine the job retention rate of employed graduates.

Primary Purpose: To evaluate the college program's adequacy in preparing graduates for the world of work.

WRITING QUESTIONNAIRE ITEMS

If there does not appear to be a questionnaire that directly applies to the situation, the items must be written by the investigator. Again, all items must refer to the research questions, the secondary objectives, and the primary purpose. Items already known to the investigator from student records should not be asked. These may include items such as race, sex, major field of study, grade point average, and whether the person graduated. Space on the questionnaire should be reserved for only those items that are unknown to the investigator.

The questionnaire should be kept as short and simple as possible. Ideally, it should not be more than two sides of one page. Complex items and long questionnaires may result in erroneous information and a very poor rate of return. The following are some suggestions for good questionnaire construction:

1. Have the final questionnaire typeset so that it looks professionally done.
2. Use colored paper. Research shows that the response will be greater (especially with "warm" colors, such as goldenrod or salmon).
3. Utilize maximum white space (open space around the items) so they don't look jammed in and complex.
4. Do not use double negatives in items (for example, "I disagree that graduates do not need on-the-job experience prior to graduation"), which can confuse respondents.
5. Use very simple wording. Do not use "educationese," such as *retention rate,*

performance objectives, etc. Remember that students and employers may not be familiar with the terminology frequently used by educators.

6. Define any terms or abbreviations that may be unfamiliar to respondents.
7. Provide sufficient space for respondents to answer the questions.
8. Include an addressed, stamped return envelope for the respondent. Use metered postage, so postage will be charged only for those envelopes that are returned.
9. Be as brief as possible.
10. Prepare each questionnaire for a specific target audience.

TYPES OF RESPONSE ITEMS

There are several ways in which response items can be categorized. The two major approaches are open-ended and closed-ended questions.

OPEN-ENDED QUESTIONS

Open-ended questions allow the respondent to answer the items entirely in his or her own way. This method may result in responses that were not thought of by the researcher; however, it requires much more work on the investigator's part to decipher answers and arrive at meaningful conclusions.

EXAMPLE A

What were the weaknesses in the occupational program in which you were enrolled?

EXAMPLE B

What are the major tasks you perform on the job?

In order for the responses to open-ended questions to be used, they must be categorized for summary purposes. The time involved in tabulating the responses, especially if the sample is large, is an important consideration in the decision to use open-ended questions.

CLOSED-ENDED QUESTIONS

Closed-ended questions are more frequently used in follow-up studies because they are much easier to analyze. Some examples of structured-response, or closed-ended, questions are dichotomous items, multiple choice items, ranking items, and rating items.

Dichotomous Items

Dichotomous items offer two alternative responses, such as *true-false*, *yes-no*, *agree-disagree*, etc. The responses they allow are always opposites.

EXAMPLE A

Are you employed full-time? ____ *Yes* ____ *No*

EXAMPLE B

The education I obtained from my community college enabled me to obtain a job. ____ *Agree* ____ *Disagree*

Results from dichotomous items can easily be tabulated and reported in terms of a frequency count (e.g., 542 responded *yes* and 318 *no*) and percentages (e.g., 59 percent reported *yes* and 41 percent *no*).

Multiple-choice Items

Multiple-choice items give the respondent more than two options for the response. The alternatives should represent all possible responses.

EXAMPLE A

Instructions

Please answer all questions by circling *all* appropriate letters that most closely describe your answer and/or by writing your information in the blanks. If necessary, ask the appropriate authorities for the information requested.

1. Type of business
   A Government
   B. Banking
   C. Professional
   D. Hospital
   E. Insurance
   F. Industry
   G. Other (specify) ______________________________
2. Number of employees in your company
   A. 1-20
   B. 21-50
   C. 51-500
   D. 501-1000
   E. 1001 or more
3. In your company, record and information management is handled as:
   A. a separate function
   B. part of one department (specify) ______________________________
   C. part of several departments
   D. no formalized program

EXAMPLE B

Use the following scale to answer the questions below.

5 = Very much
4 = Some
3 = Undecided
2 = Not much
1 = Not at all

______ (1) To what extent do you feel that women and men are encouraged or counselled into nontraditional program offerings at ________ Community College?

______ (2) To what extent, in your opinion, is your department actively addressing the concerns of women?

______ (3) How much do you feel is being done at ________ Community College to recruit, appoint, and promote women and men on an equal basis?

Ranking Items

Ranking items allow placement and follow-up personnel to get varying degrees of intensity from the respondents. The investigator must be careful not to include too many items, however, and must make sure that the possible responses are mutually exclusive. That way, the respondent can clearly delineate among them.

EXAMPLE

Rank the following factors in order of importance from *1* to *5*, with *1* being most important and *5* being least important.

What aspects of your community college program were most important in helping you obtain a job?

______ Course content
______ Faculty
______ Student contacts
______ Lab experience
______ Personal growth

Results of rankings should be listed in order of the average, or mean, rank for each item. To obtain the mean rank, add all the individual ranks assigned to an item and divide by the total number of rankings. For example, if an item is ranked as *1*, *2*, and *1* by three different people, the mean rank would be obtained as follows:

$$1 + 2 + 1 = 4$$
$$4 \div 3 = 1.33$$

Then each mean rank can be ordered from, say, the most important (lowest score) to the least important (highest mean rank).

Rating Items

Rating items enables the respondent to describe his or her reactions to a question more fully.

EXAMPLE

How would you rate the quality of the education you received at ________ Community College?

______ Excellent ______ Average ______ Poor

Rating scales that incorporate both positive and negative response options may be expanded across three, five, or seven alternatives. It is most important that the alternatives include an equal number of parallel positive and negative options. Such a scale is referred to as a Likert scale, after its developer, Rensis Likert.

EXAMPLE A

	(1) *Totally Disagree*	(2) *Disagree Somewhat*	(3) *Neutral*	(4) *Agree Somewhat*	(5) *Totally Agree*
More lab experience would be helpful	________	________	________	________	________

EXAMPLE B

	(1) *Very Important*	(2) *Somewhat Important*	(3) *Undecided*	(4) *Somewhat Unimportant*	(5) *Very Unimportant*
Ability to type 45 w.p.m.	________	________	________	________	________
Ability to take shorthand	________	________	________	________	________

The results of rating scales are determined by adding the "score for each response (such as a *2* for a *Somewhat Important* response in Example B) and then finding the average, or mean, rank for each rating. That way, the results can be listed in order of agreement or in order of importance, frequency, etc.

DIRECTIONS FOR RESPONSES

Each type of item should include concise instructions telling the respondent exactly how to answer.

EXAMPLE A

Place an *X* in the box to the left of the item to indicate your answer.

EXAMPLE B

Rank the items in the order of importance that you think applies, with *1* being most important and *5* least important.

PILOT TEST

The questionnaire must be pilot tested on individuals similar to those for whom it is intended. In other words, a questionnaire intended for graduates must be tried out on graduates; one intended for employers must be piloted with employers. The same individuals must not, however, be used in both the pilot test and the actual survey. Otherwise, prior knowledge of the questions will bias the final set of responses.

The pilot test is used to point out problems, inconsistencies, and possible errors so that they can be remedied prior to the actual survey. After the instrument is administered, the pilot-test respondents should be interviewed to determine the following:

1. What did each question mean to you?
2. Were there any items for which you did not feel the response options were appropriate and/or adequate?
3. Are there other items that would be important to include?
4. Were any of the items redundant or pointless?
5. Do you have any suggestions for improving the questionnaire?

DATA PROCESSING AND ANALYSIS

Small colleges with relatively small numbers of former students can usually handle the results of placement and follow-up studies manually, if they do not have computer capabilities. A calculator, preferably a programmable one, is sufficient for tallying responses and performing any simple statistical tests necessary.

Large institutions require data processing support because of the sheer numbers of students who must be investigated. When the sample size is large or the questionnaire is complex, it is best to set up the survey instrument for computer processing. The investigator should contact the college's data processing office to determine the most appropriate way to do this *before* completing the instrument. Taking this step before conducting the survey will save hours of trying to figure out what to do with the data later.

Among the numerous ways in which questionnaires can be prepared for data processing are the following:

1. Data from the questionnaire can be transferred to coding sheets and then keypunched and processed.
2. The questionnaire can be set up so that a keypuncher can keypunch directly from it, saving the interim hand-coding step.
3. Data processing departments with optical scanning capabilities can input the responses to the computer directly.

A number of colleges have "canned" software packages for processing data, such as the Statistical Package for the Social Sciences (SPSS) or the Biomedical Computer Programs (BMDP). Such packages can be used to determine frequency of response, average responses (means), most frequent responses (modes), standard deviations, percentage distributions, cross tabulations, statistical tests of significance, and much more. Cross-tabulations allow the investigator to take a variable such as major field of study and compare it with other responses to find out how former students answered based on their respective major.

Data processing personnel can assist the investigator in interpreting the results obtained on the computer printouts. The table that follows is an example of a printout using the Statistical Package for the Social Sciences.

```
BROWARD COMMUNITY COLLEGE  FOLLOW-UP SURVEYS 1975                         06/24/75        PAGE    6
FILE    NONAME    (CREATION DATE = 06/24/75)
VARIABLE    VAR002      SEX

VALUE LABEL                                   VALUE    ABSOLUTE    RELATIVE    ADJUSTED    CUMULATIVE
                                                       FREQUENCY   FREQUENCY   FREQUENCY    ADJ FREQ
                                                                   (PERCENT)   (PERCENT)    (PERCENT)
                                          - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

MALE                                             1.       250         53.2        53.3         53.3

FEMALE                                           2.       219         46.6        46.7        100.0

NO RESPONSE                                      9.         1          0.2      MISSING       100.0
                                                       -------     -------     -------      -------
                                              TOTAL       470        100.0       100.0        100.0

STATISTICS..

MEAN             1.467                      STD DEV          0.499

VALID    OBSERVATIONS -         469
MISSING OBSERVATIONS -            1
```

INADEQUATE RESPONSE

If fewer than two-thirds of the survey questionnaires are returned, respondents and nonrespondents must be analyzed to determine if the two groups are significantly different. This is one reason why it is imperative to be able to tell who responded and who did not. The analysis should compare the demographics of the two groups, including factors such as race, sex, age, major field of study, geographic origin, grade point average, and number of credits earned at the community college. 86

DATA PRESENTATION

There are two major statistical methods: descriptive and inferential. Descriptive statistics are used when the sample is nonrandom or when an entire population is surveyed. Inferential statistics are used when a random sample is selected for surveying and the purpose is to make inferences about an entire population from the results. Most placement and follow-up studies are descriptive in nature and thus necessitate the use of descriptive statistics.

LEVELS OF MEASUREMENT

The three major levels of data measurement are nominal, ordinal, and interval. The level of measurement must be determined before the investigator can select the appropriate statistical techniques to employ. In general, the higher the level of data, the more statistical techniques can be used as the data are analyzed.

NOMINAL LEVEL

The nominal level is considered the "lowest," or most basic, level of measurement. Nominal level data are those that can be placed into name categories, such as race, sex, or geographic origin. Each category is merely tallied to determine its frequencies.

ORDINAL LEVEL

Ordinal level data are those that can be ranked as well as categorized; thus the investigator can order the data from low to high. Ordinal level data do not indicate the distances between the rankings. When football teams are ranked, for example, the standings indicate the order in which the teams have been ranked, but they do not indicate that the team ranked #1 is twice as good as the team ranked #2.

In placement and follow-up studies, examples of ordinal level data include rankings of social class, attitudinal measures, and the importance of certain job tasks or program components to performance on the job.

INTERVAL LEVEL

Interval level data, the highest level of measurement, contain the properties of the first two levels; that is, they can be categorized and rank-ordered. In addition, they specify the exact distances between numbers. Examples are ages, years of college, terms of attendance at the community college, and salaries.

TYPES OF DESCRIPTIVE TECHNIQUES

The major types of descriptive techniques are graphic presentations of data, measures of central tendency, and measures of dispersion.

GRAPHIC PRESENTATIONS

Some of the most commonly use techniques for presenting data graphically are frequency distributions, percentages, histograms, frequency polygons, bar graphs, and pie charts.

Frequency Distributions

Frequency distributions are obtained by tabulating all the responses or scores. Frequency distributions can be used to describe nominal, ordinal, or interval level data.

EXAMPLE

Salary (per week)	Frequency
$100 or less	20
101-200	78
201-300	35
301 or more	5

Percentages

Frequencies are more meaningful when they are converted into percentages. It is helpful to carry the calculations to one decimal place when the percentages are rounded off, so that the figures add up to an even 100 percent. Percentages can be used to describe nominal, ordinal, or interval level data.

EXAMPLE

Salary (per week)	Percentage
$100 or less	10.0
101-200	55.5
201-300	24.5
301 or more	10.0

Histograms

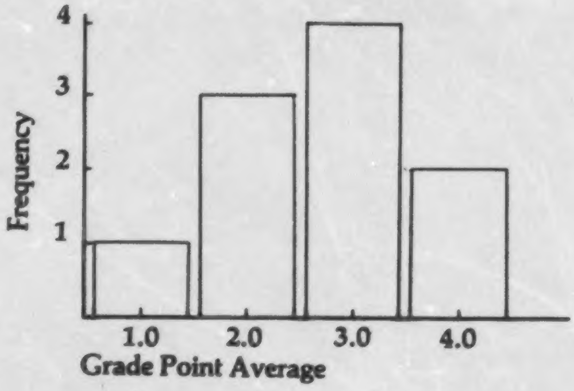
Histograms use vertical bars to illustrate a frequency distribution. They can be used to describe interval level data.

The following steps are involved in drawing a histogram:

1. Using graph paper to keep all the segments equal, draw vertical and horizontal axes.
2. Mark off segments of equal lengths on both axes.
3. Label the vertical axis to represent the frequency and the horizontal axis to represent the variable.
4. Draw a vertical bar over each value of the variable so that its midpoint is over the value on the horizontal axis and its top is even with the frequency for that value.

EXAMPLE

Grade Point Average	Frequency
1.0	1
2.0	3
3.0	4
4.0	2



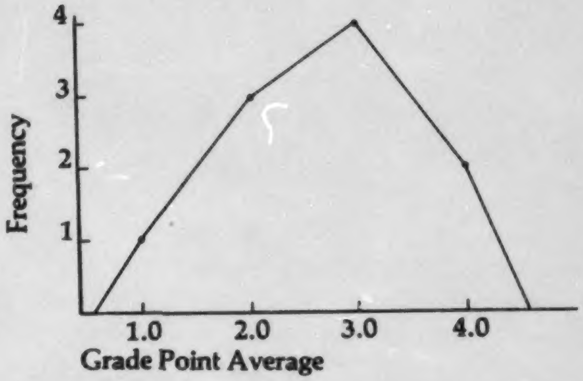
Frequency Polygons

Frequency polygons are similar to histograms except that the recorded values are connected by a continuous line.

EXAMPLE

Grade Point Average	Frequency
1.0	1
2.0	3
3.0	4
4.0	2

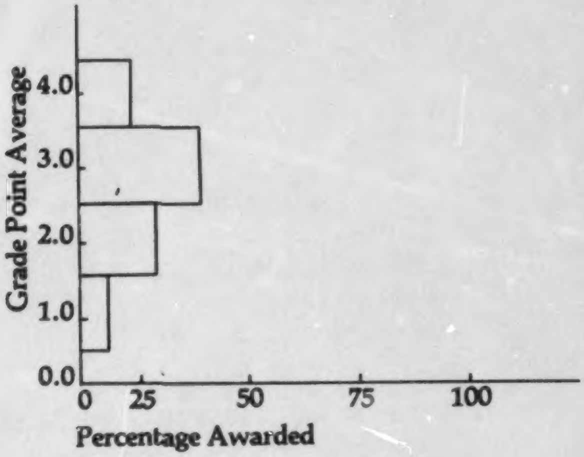
88



Bar Graphs

Bar graphs are similar to histograms except that they use horizontal bars to represent the frequency or percentage with which specific characteristics exist in the data.

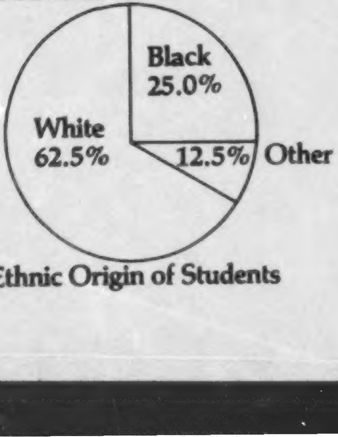
EXAMPLE



Pie Charts

Pie charts are excellent graphic aids for demonstrating the division of a single entity. They are often used to indicate budget distributions, that is, the percentage of the "pie" received by each program area. Pie charts should not have more than five subdivisions, so that the segments are easy to visualize. Each section, or "slice of the pie," should be the same percentage of the total area as the percentage it represents.

EXAMPLE



Ethnic Origin of Students

MEASURES OF CENTRAL TENDENCY

In a statistical distribution, the values tend to cluster. This clustering, which is termed *central tendency*, is usually measured by the mean, the mode, or the median.

Mean

The mean is the average score. It is determined by adding all the scores and dividing the sum by the number of scores in the sample (the *sample size*). The mean requires interval level data.

EXAMPLE

Score	
5	
4	
1	Sum ÷ Sample Size = Mean
3	15 ÷ 5 = 3
2	
Sum: 15	

If a number of different samples exist and the investigator wants to determine the "mean of the means," each individual sample mean must be multiplied by its sample size. Then the total sum can be averaged by the sum of the sample sizes.

EXAMPLE

Sample	Mean	Sample Size	Mean X Sample Size
(1)	2	16	32
(2)	5	10	50
(3)	3	6	18
		Sum: 32	Sum: 100

$$\frac{\text{Sum of Mean X Sample Size}}{\text{Sum of Sample Sizes}} = \frac{100}{32} = 3.125 \text{ or } 3.12$$

Mode

The mode, which is sometimes referred to as the "most popular" score, is the most frequently occurring score. It requires nominal level data.

EXAMPLE

Score	Tally	
10	1	
15	1	
7	2	7 is the mode
12	1	
5	1	

Median

The median is the point above and below which the *number* of scores is equal. Ordinal level data are needed for the median to be used.

EXAMPLE

Score	
10	10 is the median
15	
7	
12	
5	

MEASURES OF DISPERSION

Dispersion is the extent to which scores in a distribution deviate from the central tendency. Among the measures of dispersion are the range, the variance, and the standard deviation.

Range

The range is the spread of the scores in a distribution. It is determined by subtracting the lowest score from the highest score.

EXAMPLE

Score	
10	
15	Highest Score - Lowest Score = Range
7	15 - 5 = 10
12	
5	

Variance

The variance is based on the mean. It is obtained by squaring the variations from the mean, finding the sum of the squared variations (the *sum of squares*), and dividing the sum of squares by the sample size.

EXAMPLE

Score	
4	
8	
3	Mean = Sum of Scores ÷ Sample Size
Sum of Scores: 15	Mean = 5

Variations from the Mean	Variations from the Mean Squared
4 - 5 = -1	(-1) × (-1) = 1
8 - 5 = 3	(3) × (3) = 9
3 - 5 = -2	(-2) × (-2) = 4
	Sum of Squares: 14

Variance = Sum of Squares ÷ Sample Size
= 14 ÷ 3
= 4.67

Standard Deviation

The standard deviation is the square root of the variance.

EXAMPLE

Variance = 4.00
Standard Deviation $= \sqrt{4.00}$
$= \pm 2.00$

INTERPRETING THE MEAN AND THE STANDARD DEVIATION

It is important for the investigator to understand the impact of the mean and the standard deviation in order to interpret the study results. In a normal distribution, approximately 68 percent of the scores fall within plus or minus one standard deviation of the mean. If the mean of a normal distribution is 10.00 and the standard deviation is ±2.00, for example, approximately 68 percent of the scores will fall between 12.00 (mean +2.00) and 8.00 (mean −2.00).

The larger the standard deviation in comparison with the mean, the less appropriate the mean becomes as a measure of central tendency. Such a phenomenon implies that the data are highly scattered and that use of the mean may be misleading. In such instances, it may be more appropriate to use the mode or the median to measure central tendency.

REPORTS AND REPORT WRITING

The final report of any research study should be written to the specific audience for which it is intended; different versions of the findings should be prepared for different target groups. The following checklist can be used to determine the most appropriate approach.

1. Determine the target audiences (such as the administration, the state, the faculty, the public).
2. Determine what type of information is pertinent to each target group.
3. Determine the writing style appropriate for each target group.
4. Decide what format could be best used to reach each group most effectively and efficiently (for example, a newsletter highlighting results for the faculty, an article in a trade magazine for employers, a formal research report for the board of trustees and state agencies).
5. Establish responsibility for the preparation of the report.
6. Test a draft version of the report on several people similar to those for whom it is intended.
7. Make arrangements for the printing/duplicating of the material. Always keep a photocopy of materials sent for printing/duplicating in case they are lost or accidentally ruined.

Gearing the report to a specific target will enhance the probability that it will be read and that the study results will be used to bring about change for the better.

Summarize as much as possible, using tables, charts, and graphs to tell the story pictorially. When making oral presentations always supply handouts of the major points; many times audiences cannot see visuals adequately. Include copies of the instruments used so the audience has a better understanding of the discussion. Present results clearly and concisely in an aesthetically appealing manner.

SUMMARY

Individuals responsible for designing an evaluation system of former students must have certain research competencies, as well as a knowledge of the state of Florida's reporting requirements. The descriptions of research techniques and statistical terminology provided in this section should enable the placement and follow-up officer, or any individual working in this area, to establish a basic knowledge of research methods prior to compiling placement and follow-up data and completing the state reporting forms.

SECTION III
COMMUNICATION

Prepared by:
Robert W. Evans

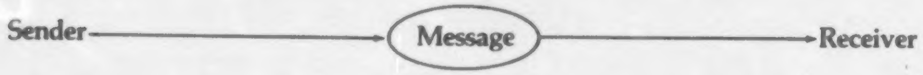
THE PROCESS OF COMMUNICATION

In the context of developing effective placement and follow-up personnel, it is important to emphasize the following assumptions that underlie the role of communication:

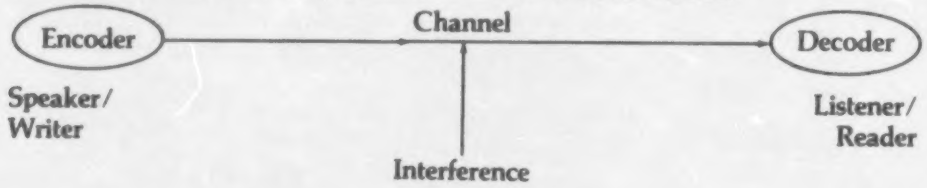
1. Self-expression is only one aspect in the communication transaction. Persons who would strive to improve their communication skills must focus not only on expression but also on finding ways to improve the responses of others.
2. A suitable model of human communication is not based solely on the transmission of messages but rather on the transactional nature of the relationship between the writer/speaker and the reader/listener. Thus, such a model employs the active process of giving and taking.
3. In the development of placement and follow-up personnel (if not, indeed, in the development of human beings), there is nothing so practical as a valid theory of communication.
4. Communication skills are not a gift a person possesses; rather, they are acquired skills.
5. Communication is an ongoing, dynamic, ever-changing process in which even one event affects all other events.
6. The primary act that differentiates communication from other forms of behavior is the assignment of meaning or significance to people, objects, or events.

MODELS IN COMMUNICATION THEORY

For some years, a basic communication theory held that in order for effective communication to take place there must be a sender, a message, and a receiver:



A later model elaborated on the basic model and was thus refined:



This model is based on the assumption that communication occurs when a person has an idea to communicate, when s(he) encodes the idea for transmission through a channel to someone else's decoder, and when, if there is no interference in the channel, the idea arrives in the mind of the receiver--just as it left the mind of the encoder.

There are, however, at least four basic flaws in this model:

1. A speaker/writer is not simply initiating a message. S(he) is responding to the occasion, to the listener/reader, to his or her own motivations, and to a conception of how s(he) wants the listener/reader to respond.

2. A listener/reader is not simply receiving a message. S(he) is responding to the way s(he) perceives the occasion, the speaker/writer's purpose, and his or her other motivations.

3. A linguistic message—from utterance to recognition—is coded, transmitted, and decoded. But that is not all. Experimental studies indicate that *who* is perceived as the source of the message determines, in part, what message is received and, more importantly, how the listener/reader will respond.

4. While the transmission of messages is analogous to the transmission of goods, the transmission of ideas is not really possible, nor is it, perhaps, the real goal in human communication.

Thus, as individuals operate together in a communication transaction, there is no exact transmission of ideas but—through a complex variety of means—there are efforts by each person to *induce* thought processes or behaviors as the outcomes of interactions. The idea of transmission from speaker/writer to listener/reader presupposes identical responses to a coded message—whether spoken/written or heard/read. The fact is (a fact easily observable in the placement and follow-up area) that people simply do not respond identically, for they operate on perceptions based on different experiences and they apply diverse meanings on the basis of these perceptions and motivations.

Out of these concepts emerges another communication model: transaction through induction. The idea of induction presupposes a need to adjust speaking/writing and listening/reading behavior to induce a desired result from the interaction: a speaker/writer chooses what s(he) will say on the basis of a prediction of how it will be perceived by a particular listener/reader (or a group of listeners/readers), and a listener/reader chooses his or her mode of behavior on the basis of a prediction of how it will affect the result of the interaction.

In summary, then, communication is something that occurs first of all within the individual. The very essence of communication—the process of assigning meaning to stimuli—must take place internally, in the mind. Each of us is a self-contained system of communication, each with his or her own stimuli, interpretations, and responses.

It could be said that communication occurs when individuals "talk" to one another. They react to one another and transmit in response to what another individual has said. The behavior of each one is a consequence of the behavior of the others; they depend on one another for stimulation and cues about how to behave and what to say.

DIFFERENCES BETWEEN ORAL AND WRITTEN COMMUNICATION

The competencies identified for this project deal with both oral and written communication. The use of theoretical communication concepts here focuses on the similarities between the two means of communication. There are, however, some important differences between the two methods.

It may be that the most important difference, in terms of intelligibility, relates to the relatively more transitory nature of oral communication. If you can, consider a sentence as a train of linked railway cars (language symbols); the sentence in written form is the train at rest—at the station or on a siding. The sentence spoken is analogous to the train in motion. With written communication, if you want to examine one of the cars in the train in greater detail (by looking up the definition of a word that is unfamiliar to you, for example), you can do so at your leisure. The train remains on the siding while you conduct your examination. But to conduct this same examination during oral communication is to extract one car from a moving train. You can complete the examination, but the train will continue moving and leave you behind.

When you are reading a written communication, you can meditate on the content at your leisure; you can stop and rest when you are tired. You can reread as many times as necessary to be certain that you are grasping the author's intended meaning. But if you do this while listening to oral communication, the speaker will continue along without you. The transitory nature of oral communication should be prominent in your thinking as you design communications for either the spoken or the written word.

A second major difference between oral and written communication identified by many communication theoreticians resides in the intensely personal nature of speech. When you prepare for an oral communication presentation you are preparing for a specific audience, and during the presentation speaker and audience are reacting to each other. Contrast this with your preparation for written communication. Your prospective readership is usually less well defined, and because of this must be treated in a more generalized and less personalized way. During communication itself, your "audience" is dispersed and may be reading the message in a variety of circumstances, with reactions you cannot observe at the time. This impersonal aspect of written communication is familiar in academic writing, where the use of the impersonal third person not only minimizes reader identity but also makes the writer anonymous.

Although the differences between the two forms of communication are real, you can analyze your probable reading public for specific written communications. This analysis can enable you to target your writing to the reader in a fashion similar to adapting speech to a specific listening audience.

SOME BARRIERS TO COMMUNICATION

This section would not be complete without a brief review of some barriers to communication. Communication is a human process and, as such, is always incomplete, always slightly distorted, and always modified. Among the real barriers to effective communication are the following:

1. *Premature evaluation.* There is a tendency to judge, to evaluate, and to approve or disapprove prematurely. Premature evaluation serves also as a defense for our ideas, our positions, and our psychological security.

2. *Semantic problems.* Communities are frequently "multilingual": citizens speak one language, school officials another one, community leaders another, and so on. Communicators cannot simply assume that the meaning they associate with a word is the same one the receivers will apply.

3. *Organizational barriers.* These are the barriers that exist within competing organizations that seek to establish power bases among their constituencies. In the process, these organizations supply their own "filters" to communication, which tend to absorb much information.

It would be difficult to classify any one of these barriers as being more important than the other two; undoubtedly, in specific situations each of the three is at times "most important." Semantic problems seem to be identified most frequently, however. Special attention is thus given here to the role of language in communication.

LANGUAGE AND COMMUNICATION

Language is a tool for developing thoughts and expressing those thoughts. The appropriate words and word combinations can serve to bring people together, to produce understanding, to arouse concern, and to stimulate meaningful action.

But language also frequently serves to interfere with effective communication by contributing to confusion and misunderstanding. It is important for you to understand how words, ideas, and people relate between and among each other and to develop a style of language usage that grows from this understanding.

Entire books have been devoted to the study of language usage and behavior. It is not the intention of this manual to substitute for or replicate such works; you may well want to consult one of the popularized treatments on general semantics in relation to these subjects. It will serve the purpose here to deal with the basic principles drawn from the study of general semanticists.

The first of these principles is that words are symbols for things (referents); they are not the things themselves. This principle seems terribly obvious, but it does not take long to think of instances where we respond to words as the things themselves. How many persons do you know who shiver at the mere mention of *snake*, *rat*, or *spider*—not the creatures themselves but the words? Words are merely symbols for use in describing something, and of course a word has no effect on the thing it describes.

But we often respond to words as though they endowed the thing itself with certain qualities. Consider our reaction to institutions described as "democratic" compared to those described as "totalitarian," even though there may not be functional differences. If we are not careful, we attach arbitrary word labels to things and then behave as though the label creates an actual difference in the thing we have applied it to.

The second principle of importance here really grows out of the first. Because words are not things, but merely symbols for things, words have no inherent meanings; they have only the meanings we assign to them. The meaning itself is not in the words; it is only in the minds of those who use the words. Words do not *contain* meaning; they are merely the tools by which we attempt to *convey* meaning. And the more abstract the word, the less actual meaning it conveys. Although listeners may understand words readily enough, the meaning they attach to the words may be quite different from the meaning the speaker intended. This is one of the reasons that when we think we have communicated, we may, in fact, be far from mutual understanding.

SPECIAL CIRCUMSTANCES

The material in this section provides a conceptual framework for communication that should permit you to adapt effectively to the variety of communication situations you will face. As a placement and follow-up specialist, however, you may encounter some special circumstances that deal with the ethics of communication.

One of these circumstances may arise as you gather the data about which you intend to communicate. It will not be uncommon for the sources of the data to request confidentiality and/or anonymity. There is no formula for developing the professional attitude that is necessary to earn the trust of these sources. It can only be noted that the rhetorical theory of the ancient Greeks treated *ethos*, or ethical proof, as a type of proof that the communicator brings with him or her. It will be through exhibiting a high degree of ethical proof that you can treat questions of confidentiality and anonymity properly.

Another special circumstance worth mentioning grows out of one of the specific competencies identified in the project research: that the individual must be competent in "discriminating the *need to know* and *what is needed* by each public to be addressed." It would appear that no generalization is possible here. Most institutions will have developed their own guidelines for a "need-to-know" policy, and you will be governed by that policy. The material in this section concerning the transactional nature of communication should provide appropriate direction for dealing with the "what-is-needed" question.

SUMMARY

The placement and follow-up specialist needs to develop numerous specific communication competencies. The first steps in that development consist of cataloging the communication situations you will be facing, taking inventory of your present communication skill proficiency, and designing a self-improvement program that relates the two.

100 Following those first steps, attention should be given to a conceptual theory of communication that emphasizes the transactional nature of the process. This approach will necessitate an initial clarification in your own mind of what is to be communicated; analyses of who is to receive the communication, with emphasis on meeting the particular needs of those listeners/readers; and the application of techniques that seek to avoid the common barriers to effective communication.

Overlaying the whole process will be a knowledge of the sensitive nature of your position as a placement and follow-up officer, with the attendant responsibility for developing a priority for highly ethical communication.

SECTION IV

MAKING EFFECTIVE USE OF EDUCATIONAL FOLLOW-UP INFORMATION

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PREFACE

The material in this document is directed toward meeting the need for improvement of vocational education programs through the use of follow-up information. Specifically, it was designed to aid assistant superintendents and deans of instruction, vocational directors and deans of occupational education, curriculum and occupational specialists, principals, teachers, program managers and other educators in the utilization of follow-up data for planning and decision making, curriculum and program review, and documentation of accountability requirements.

The major purpose of this document is to increase the rate of utilization of follow-up data. While the literature is replete with theoretical and functional considerations of data accumulation, an extreme scarcity of information about the actual on-the-job utilization of follow-up material is in evidence. In other words, information is abundant concerning the collection phase of the follow-up process, but virtually nonexistent about the application phase.

Although this report is designed primarily for use in vocational and occupational areas, it may be generally applied to other segments of education as well. Data accumulation pertaining to accountability, job placement, and employer attitudes are primary objectives of vocational follow-up; while teaching methods, curriculum structure, and student suggestions for improvement are more typically the major areas of general education surveys. Although the instrumentation and compilation of vocational and general education data are typically dissimilar, the interpretation, presentation, and application of the findings are many times comparable.

There are numerous philosophical and procedural aspects of follow-up which this study does not address itself to. It does not outline in detail the considerations involved in establishing a follow-up program and subsequently gathering information, nor does it deal with random sampling, questionnaire construction, or analysis techniques. It does not consider the role of the follow-up coordinator or any aspect of a coordinator's or decision maker's responsibilities. It rarely relates to any phase of follow-up prior to the point where survey results are tabulated and returned for interpretation and utilization.

This publication is based primarily on direct consultation with certain persons involved with particular aspects of follow-up. It appears that follow-up coordinators and administrators find it difficult to relate successes in their programs into hard and fast rules for others to adopt. However, many of the procedures and processes in this publication are taken directly from the field and may be considered valid for certain programs and/or educational systems. Although a thorough review of the limited literature related to data utilization was undertaken, no work was found that paralleled the purpose of this investigation.

Preparation of a study of this nature is contingent upon the cooperation and assistance of a host of institutions, groups, and individuals. The writer wishes to express sincere appreciation to the many individuals around the state who aided in the preparation, review, and publication of this document. Special thanks to the follow-up coordinators and administrators who contributed their valuable ideas and experiences on data analysis and utilization.

A special debt of gratitude and appreciation is expressed to the director and staff members of the Vocational Evaluation Section, Bureau of Vocational Research, Dissemination and Evaluation, Florida State Department of Education, for their assistance during the development of the study.

INTRODUCTION

Every educational agency collects data at some time and in some form. A demographic profile is collected as a student enrolls, and termination information is collected when the student graduates or exits early. These and a variety of statistics are maintained all along the route of a student's educational career.

Yet with all the information collected about and for the many facets of education, it is only recently that data have been employed to measure the effectiveness of courses and programs. Amazingly, educational accountability and change have been directed by a philosophy of "our product is acceptable, and it's up to the public to take what we are sending them." It appears that management and decision making practices have been arbitrary in most cases and in some instances even capricious.

Follow-up is an integral part of most evaluative and decision making processes in vocational education. While procedures of this nature have been recognized since the conception of formalized education, only recently has there been an organized effort to establish and implement any type of systematic follow-up methodology. Follow-up was traditionally employed as a segregated process, usually in vocational and occupational areas, with little or no regard for its integration into formal evaluation or management plans. Yet a successful follow-up program cannot function effectively in isolation. It has far-reaching implications for all segments of a total system of evaluation, and must be treated accordingly. Fortunately, this restrictive approach toward follow-up is in rapid decline as educators become increasingly aware of the need for comprehensive management plans and systemized evaluation programs.

It was in the area of vocational education that the scope of evaluation was first broadened to include the follow-up of program completors. Although follow-up and evaluation are by no means synonymous, there has been a common misconception that they are. As employed in this report, follow-up is defined as: "one aspect of an evaluation system designed to obtain data, information, or opinions about or from former participants in the educational process."

Of course there are several other formal definitions of follow-up that may be noted throughout the literature. Whatever the choice, the central theme in a definition of follow-up is that a former student or his/her employer is asked to express values and opinions about certain factors involved with the educational process.

Obviously, if follow-up information is not used, it has little, if any, value. Data collected in the most effective follow-up programs are of questionable worth when they are relegated to virtual non-use and merely shelved for future reference. An effective follow-up program is comprised of several processes, one of which, and unquestionably the most important, is the actual utilization of the information collected.

The term *follow through* is sometimes attached to the technique whereby follow-up information is employed for programmatic change. If the reader feels comfortable with this term, then this report is directed toward the increase of *follow through*. However, labeling the process of data utilization as *follow through* often tends to place *follow through* on the level of follow-up, as an additional process to engage in after the follow-up program has terminated. In other words, after follow-up, *follow through*.

While in complete agreement with the objectives of the *follow through* process, it is nevertheless contended that more impressive rates of data utilization could be achieved if *follow through* procedures were dealt with as an inherent segment of a comprehensive follow-up program on par, for example, with data collection or analysis processes. Rates of data utilization remain low because many educators appear to associate *follow through* as an optional process, and do not consider this activity as perhaps the most important phase of an effective follow-up program.

Regardless of the semantic or philosophical differences that might be attached to the terms that describe the actual use of follow-up information, rates of data utilization must be increased. This presentation is addressed to that goal.

CHAPTER I
OVERVIEW OF FOLLOW-UP

WHY FOLLOW-UP?

Follow-up data are extremely important to local and state educational agencies, and since federal support programs are often involved, they are equally important to the U.S. Office of Education. In fact, federal requirements for the collection of follow-up information have been expanded by Title II, Section 112, of the 1976 Vocational Amendments. Since the best follow-up systems are usually dependent upon data collected in well designed and properly implemented local educational agency follow-up programs, integration and articulation of information from all levels is essential. So the need and importance of follow-up, especially at the local level, is an educational fact of life.

Meanwhile, the taxpaying public is questioning the worth and relevance of educational programs, including vocational and technical programs. The planning and subsequent management of educational programs based on little or no objective data is questionable, to say the least, in an era when justification of actions is called for from all levels of society. Simply stated, the era of accountability is here, with the proliferation and increased use of follow-up information as a natural by-product.

Section 230.67, Florida Statutes, as amended, requires each district school board to maintain placement and follow-up services for students graduating from or leaving the public schools system, including area vocational technical centers. Florida Statutes and State Board of Education Rules also require community colleges to establish and maintain organized placement and follow-up programs to assist students graduating from or leaving the community colleges. In addition, many school districts and individual institutions collect follow-up information for their own varied purposes and needs. Irrespective of the institution or agency called upon to collect the data, follow-up studies are generally gathered for four major purposes: (1) to improve programs; (2) to provide a basis for accountability; (3) to aid in planning; and (4) to aid in decision making.

It should be noted that, although these general purposes may be distinct objectives of certain follow-up programs, they are nevertheless highly interrelated and interdependent. For example, it is possible to gather and employ data only for the specific purpose of improving programs. But since program improvement is a direct result of planning and decision making, it is difficult and possibly self-defeating to segregate these processes and consider them separately.

In addition to being constructed around broad, general purposes, follow-up programs are also formulated and based on specific goals and objectives. Since follow-up programs are often localized and situational, a compilation of the many specific goals of such systems is well beyond the scope and depth of the publication. Moreover, some studies are very narrow in focus with detailed objectives pertaining only to that particular investigation. It does appear, however, that in most situations the major impetus of follow-up is directed toward similar goals. The following list describes some of these goals:

1. To determine the adequacy of goals and objectives of instructional programs in which former students were enrolled.
2. To gather information for evaluating the services provided through the placement program.

3. To compile descriptive data on all former students for use in placing future students on the job.
4. To identify data which will contribute to cost-benefit and effectiveness analysis of programs.
5. To supply information indicating the effectiveness of student preparation for employment.
6. To procure data indicating the effectiveness of student preparation for post-secondary education.
7. To gather information on all early school leavers, indicating their perceptions of curricula and programs in which they were enrolled, and to ascertain factors contributing to their termination of formal secondary schooling prior to graduation.
8. To identify all students who indicated a need for placement assistance after completion of a program.
9. To provide a service to the business community in its effort to obtain qualified employees.
10. To analyze all data with consideration for:
    (a) deficiencies in schools or programs identified by follow-up information.
    (b) modifications or changes in both curriculum and placement services needed to alleviate identified deficiencies.

While the above list is by no means inclusive, it nevertheless portrays the multi-faceted nature of follow-up. Some of the preceding general purposes depicting why follow-up studies are important and necessary will be briefly presented in this section.

TO IMPROVE PROGRAMS

The improvement of programs and course offerings is the most noteworthy intent of follow-up studies. Every follow-up philosophy, plan or program reviewed contains a reference to program refinement as a major purpose of data accumulation. Moreover, program improvement is a basic inherent purpose behind the many legal mandates pertaining to follow-up.

In addition to data gathered on the positive and negative outcomes of programs, information should also be collected that depicts additional circumstances and variables that contribute to the particular condition of a program. If a program fails to prove effective, then changes must be instituted, based in part on the characteristics and circumstances surrounding the causes of undesirable outcomes. Conversely, components or procedures that contribute to a program's success may be isolated for inclusion in deficient areas of other programs. Furthermore, it is important that follow-up information be integrated into a comprehensive management plan so that program deficiencies may be corrected on the basis of documented and objective data.

TO INSURE ACCOUNTABILITY

Public education has long been a favorite topic for complaint, and vocational education, because of its high costs, is of particular interest to both lawmakers and the general public. Considerable concern is being expressed by educators about the increasing resistance of taxpayers and legislatures to vote additional funds for school budgets. Many citizens are simply inquiring about the wisdom and productivity of placing additional dollars into the educational system. Where is the evidence that the student is receiving a better education, or that the community is receiving a more productive graduate?

Vocational educators are experiencing increased numbers of requests for justification of policies and programs. In addition, administrators are also finding that they are now having to justify their policies and actions to faculties and staff as well. As a result, administrators must develop realistic criteria for both planning and evaluation activities. Follow-up studies should become an integral part of a comprehensive planning and decision making program. Now, more than ever before, administrators are being called upon to substantiate programs and policies with current, viable data; the type typically gathered best through a well developed follow-up program.

The demand for accountability also strengthens the rationale for more vigorous efforts in the area of program evaluation. Of course, program evaluation entails numerous activities in addition to the accumulation of follow-up data; however, accountability cannot exist without a follow-up system capable of identifying the extent to which funds are impacting upon the needs and problems of schools.

All this requires much more than a financial audit of accounting records. Accountability demands a presentation of information depicting the various results of a program in relation to stated objectives and incurred costs. Follow-up studies are an integral and indispensable part of this process and are essential elements in decisions regarding the deletion, expansion, or revision of programs.

TO AID IN PLANNING

Most formal definitions of planning include or allude to the "process of choosing an effective course of action for manipulation of resources." The act of choosing, in itself, implies that alternatives exist, thus strengthening the contention that effective planning is an active, complex process. Regardless of one's choice of definition, planning is a process of allocating and directing resources with respect to combinations of timeliness, multiplicity of strategies, and predetermined goals.

As mentioned previously, extensive planning is crucial to the success of vocational education. An array of complex variables must be considered when designing programs for a comprehensive vocational education delivery system. Comprehensive planning requires data collection from several agencies and bodies, including vital information collected through follow-up programs. Whether planning is conducted on the state, regional, or local levels, follow-up information is an essential factor in the process.

Follow-up data which provide measures of limitations, parameters, and resources are essential to the establishment and assessment of goals and objectives, which are logical concomitants to effective planning. Administrators cannot develop and institute such items as comprehensive plans, capital outlay budgets, federal funding guide requests, school plant needs assessments and curriculum guides, without an extensive data base, generated in part by a vigorous follow-up program. Moreover, the judicious planning of program or course objectives and teaching strategies is at best tenuous when teachers do not have objective follow-up data at their disposal.

A consistent, coordinated structure for vocational planning is predicated on a comprehensive data collection and analysis system. However, recognizing the changing dynamics of society, educational planning procedures must be continually assessed as to their effectiveness, validity, and relevance, a process directly contingent upon information gathered through follow-up studies. Therefore, the gathering of follow-up information, as well as the determination of worth, plays a significant role in educational planning.

TO AID IN DECISION MAKING

A discussion of the many and varied definitions of decision making is, of course, not the purpose of this section. However, an abbreviated notation of decision making procedures most mentioned in the literature may provide insight into the need for the inclusion of follow-up data in most educational planning procedures.

An analysis of decision making techniques usually includes the following steps:

1. Recognize and define the problem.
2. Analyze the problem.
3. Develop criteria for evaluating solutions.
4. Collect information.
5. Develop alternative solutions.
6. Effect change with selected solutions.

Incidentally, it may be noted by their close procedural similarities, that decision making and planning are heavily interdependent, if not inseparable. Each requires objective data from which to base inferences and draw conclusions. The magnitude of this situation cannot be overemphasized to those confronted with alternatives, because decisions, regardless of their magnitude, must be formulated with a certain amount of information in mind. Planning and decision making carried out on intuition alone can often lead to undesirable or even disastrous outcomes. Thus, a strong data base provides a key element in the reduction of decisions based on faith, while simultaneously bolstering the use of more objectivity.

Decisions regarding alternative approaches, positions, or procedures all require that objective information be available so that a basis for action or nonaction can be maintained. The decision to expand, reduce or eliminate a program, for example, can only be effectively pursued when data are present for comparison and analysis. Accordingly, data utilization of this nature not only aids those making decisions, but its use justifies the decisions to others. So, follow-up data are indispensable portions of the total bulk of information required to make and defend many educational decisions.

WHAT HAS BEEN WRONG WITH THE TRADITIONAL USE OF FOLLOW-UP DATA?

It is both important and worthwhile to note some of the problems that have hampered the effective analysis and application of follow-up information. Various adverse factors and conditions have contributed to this situation, several of which are included as follows: (1) absence of formal follow-up standards and objectives; (2) little need for accountability; (3) data rarely used for improvement; (4) limited commitment with a narrow focus; and (5) questionable data accumulation methods. While legislative mandates and local initiatives have markedly improved the scope and effectiveness of follow-up programs, the active development and utilization of follow-up is still in its infancy. This section will address itself to the aforementioned misuse and nonuse of follow-up information.

LACK OF STANDARDS AND OBJECTIVES

A major concern expressed by many follow-up coordinators is that efficient and active use of data is severely curtailed by the absence of follow-up and program standards, goals and/or objectives. Data which do find their way into actual use are employed many times with little regard to the original intent of the program. Whether programmatic, institutional, or countywide, goals and objectives must be present if data are to prove meaningful. Statistical and descriptive reports find limited acceptance if no standards for comparison and analysis exist.

The compilation and analysis of follow-up information and the subsequent organization of reporting procedures must be determined by the original purpose and objectives of the study. Data must be compiled and analyzed so that information and comparisons about the various parts of the study are clearly presented. For example, one would be well advised to establish performance standards related to student termination rates, geography of placement, relatedness of placement, student program satisfaction, employer program satisfaction and follow-up response rates, before the actual follow-up process begins. Such a practice would greatly aid those who must interpret the information, as well as help substantiate resulting action to others.

LITTLE NEED FOR ACCOUNTABILITY

As stated repeatedly, the increasing demand for accountability pervades the entire educational complex. The manner in which educational systems, especially those related to vocational education, are preparing students for careers has become a matter of concern to both educators and the public. Unfortunately, questions concerning the adequacy of that preparation have frequently gone unanswered.

It is only during the past several years that substantiation of policies and procedures have been demanded on a broad scale. Although vocational educators have long been concerned with certain aspects of accountability, administrators could nevertheless "fly by the seat of their pants" in many situations. Justification of policies and procedures, especially with corroborated data, was a rare experience, usually absent in most management plans.

Since extensive follow-up studies are a rather recent phenomenon in most branches of education, they have rarely been incorporated into the formulation of program or institutional plans. Because sound planning procedures go hand-in-hand with increased accountability, it is no wonder that formal planning and management activities were sparse during periods of low accountability. Periods where strict accountability was not demanded reduced the need for comprehensive educational planning, which in turn negated the need for thorough follow-up investigations. So, follow-up data were many times relegated to virtual nonuse, and in certain instances, not even collected.

DATA RARELY USED FOR IMPROVEMENT

Another problem common to follow-up practices has been that results of data collection have seldom been used formatively for the improvement of programs. The growth and refinement of programs has historically been the product of administrators' intuiting needs, rather than the result of an organized program of research, planning, and data accumulation. Without the benefit of an organized data base, programmatic and curricular improvements have been slow to materialize and centered in schools with innovative administrators. Furthermore, until follow-up information was utilized on a larger scale, no objective measures of new or existing programs were available.

Often follow-up data have been used to reveal weaknesses in certain programs and procedures, but without referencing avenues for further improvement. The justification of policies and programs, rather than their improvement, commands considerable attention from educational planners and administrators. Students and employers are often surveyed because a local or governmental mandate produced the primary stimulus for the investigation. Seldom is follow-up information gathered and analyzed as part of a plan of formulated programmatic or institutional needs, especially when fostered by local administrative initiatives. But perhaps the major tragedy occurs when meaningful, valuable follow-up reports are prepared only to be permanently shelved.

LIMITED COMMITMENT WITH A NARROW FOCUS

In many educational systems and institutions there has been a lack of financial and personal commitment to the task of follow-up. Some administrators have also lacked the philosophical commitment that must be present for a follow-up program to grow into a valuable management tool. In many cases follow-up programs have been informally conducted without sufficient planning or involvement from appropriate groups. Some follow-up programs have been narrowly focused, with the primary objectives directed toward institutional and/or countywide comparisons of graduates. Conversely, some follow-up studies have been extremely broad and global, with little definitive information provided. 112

It seems rather incredible in a nation that places considerable emphasis on the development and maintenance of quality products and services in business and industry, that relatively little attention has been given to educational "products." Certainly, the use of follow-up data for comparative purposes has helped improve the quality of some programs and consequentially their graduates. However, in terms of assessment of educational outcomes on a broad scale, the commitment to comprehensive follow-up programs has been quite limited.

Administrators have many times failed to deal with the various factors that could affect the outcomes and products of programs. Follow-up data were not gathered as an integral part of a comprehensive management plan, but rather collected in fragmented instances for use as indicators of how graduates ranked in comparison with others. Simply knowing the performance of graduates gives little impetus for the improvement and alteration of programs. Data collection procedures must be updated to include additional factors that could influence program success, so that administrators can expand both the scope and commitment of follow-up programs to the extent that the process should enjoy.

QUESTIONABLE DATA ACCUMULATION METHODS

The errors associated with the methods and techniques chosen to gather and analyze data are perennial problems for those involved with follow-up programs. Since the validity of a given study is directly correlated with the methods chosen to gather and analyze survey results, it is imperative that errors, both statistical and human, be kept to a minimum. The efforts of an entire follow-up program can be seriously jeopardized if survey results do not accurately reflect the conditions prevalent in the populations or samples involved.

It should be reiterated that this document is concerned with factors related to the actual use of follow-up results, and will not delve into the multitude of methods and techniques available to collect information. However, it is important to note that impressive rates of data utilization will never be realized if the methodology employed to manipulate the data is open to question.

Various institutions at all levels have been guilty of employing faulty data collection procedures in the past. In certain instances blanket surveys have been sent to an entire population, with the intent of obtaining specific information that may not have been relevant to all persons surveyed. Such questionable practices lend further evidence to the fact that minimal effort is sometimes displayed in data collection procedures. Furthermore, it appears that follow-up results are often accepted at face value with little consideration given to the many variables and limitations which can influence results. Even more damaging, those districts and institutions which have been reluctant even to become involved with follow-up may collect such minimal amounts of information that the results have little, if any, utilitarian value. When follow-up information is gathered in a manner that could negate the very purpose of the program's existence, the undesirable consequences are widespread.

WHAT ARE SOME GENERAL DESIGN PRINCIPLES OF FOLLOW-UP SYSTEMS?

Before any activities to utilize follow-up information can begin, a variety of conditions and factors which can influence the implementation of data into planning and management programs must be considered. This section is not designed to assess each philosophical and procedural consideration related to the successful operation of a follow-up program, and by no means does it purport to deliniate the exact requisites required for follow-up success. A procedural manual or some other work on the establishment and maintenance of follow-up systems would be more appropriately referenced for such a task. Nonetheless, certain features will be briefly considered which may alter the scope, validity, and utility of an entire program and, subsequently, the techniques for putting survey results into active use.

COMMITMENT AND INVOLVEMENT

Although commitment and involvement are separate components of any program, they are so interdependent that consideration of each is best facilitated by viewing them simultaneously. Perhaps the most important ingredient of any follow-up system is firm commitment from key personnel involved with all major aspects of the program. It is obvious that a follow-up program conceived and administered with minimal commitment and involvement provides little chance that accumulated results will ever be constructively used. Of course, many different individuals and processes are involved with each program, and operational questions are best answered on an individual basis as the need arises. Yet, no matter what the composition and design of a program, it can only continue to grow when commitment and involvement are evident from top to bottom in all phases of the operation.

Obtaining commitment from personnel can be further assured by involving them in appropriate phases of the follow-up process. Encouraging involvement is perhaps best attained by illustrating the important relationship of individual and group input to the success of the entire effort. Moreover, spelling out the merits of a well organized follow-up system through stated goals and objectives can better assure involvement and commitment on a broader scale. Obtaining more than a cursory acknowledgement of a program requires the utilization of certain public relation aspects, one of which is the "selling" of the program. So, an effective follow-up program must be conceived and carried out, with maximum input and encouragement of related groups and individuals, and oriented in a direction that will enhance commitment and involvement.

DIRECTION

An additional necessary feature of any system, including follow-up, is direction. One of the traditional shortcomings of follow-up has been that many programs have not been initiated locally and have been basically limited to the collection of data for the purpose of meeting legislative requirements.

Local direction and initiatives were limited, sometimes legitimately, to the extent that little use of accumulated data for creative purposes ever took place. It is quite evident to most educators by now that there is much more to a successful follow-up program than reporting information describing local conditions to persons or agencies at the state level. Programs cannot be intuitively administered with little direction, if follow-up is to advance beyond the stage of being an annual perfunctory task. Stated goals and objectives provide the initial impetus needed for follow-up to develop into a necessary, worthwhile educational endeavor.

ADEQUATE PERSONNEL

A third important aspect of a successful follow-up program is the assignment of proper personnel to manage the program. An old business adage notes that any enterprise is only as effective as its management, which of course, is also the case in education. A deficiency readily apparent in some programs has been the inability to attract and maintain qualified personnel to manage follow-up programs. Some school systems, whether by philosophical or financial constraints, do not hire personnel specifically for involvement in follow-up studies. Admittedly, a full-time follow-up coordinator may not be justified in certain situations, and many variables must be considered when hiring individuals for educational support programs. However, many follow-up programs are administered by individuals who have little formal background and training in placement and follow-up, who possess various job titles, and who work with follow-up programs only as the need arises. Such conditions can only foster a lack of confidence in the program as a whole, and further weaken the possibility that survey results will ever be actually used.

BROAD DATA BASE

Implicit in the administration of any follow-up system is the development and utilization of a broad data base. This feature of the follow-up process, perhaps more than most others, can quickly destroy the credibility of the program if information is not effectively utilized from all relevant sources. Since feedback is the lifeblood of a successful follow-up program, it is an essential requirement that all avenues for collection of information be rationally exploited.

Yet, many follow-up investigations which purport to be general in nature may be realistically termed microstudies since the populations and sampling techniques employed severely restrict the scope of the data base.

Vocational education planners and policy makers are acutely aware of the low confidence level attached to decisions based on follow-up information gathered from limited or questionable sources. While there are exceptions, it is generally true that a lack of concern for expansion of both traditional and alternate avenues of input has limited the utility of certain follow-up material. Certainly, there are many techniques which can be employed to facilitate more input into the data gathering process — surveys, interviews, questionnaires, and oral presentations, for example. Populations which might have relevant input into a particular study are also as varied as the techniques used to accumulate the data. To reiterate, information must be gathered from all possible sources and by relevant and varying techniques, so that increased utility and validity may be attached to follow-up results.

SOUND ANALYSIS TECHNIQUES

It goes without saying that the analytical procedures chosen for a particular follow-up study have far-reaching repercussions on all aspects of the investigation. Questionable analysis methodology, not unlike the use of a limited data base previously discussed, can effectively hamper operation of other follow-up processes; weaken confidence in outcomes and recommendations; and more importantly, dilute the value and utility of the entire program.

Certainly, most individuals preparing follow-up reports, as well as those who subsequently utilize them, are aware of the broad gamut of analytical techniques available for diagnosis of accumulated data. Yet, data are sometimes manipulated with limited consideration of the relevance of certain statistical techniques and with little regard for interpretation and utilization by consumers of the results. An analytical technique, whether statistical or otherwise, is merely an inferential or descriptive tool. Just as a good mechanic does not reach for an oscilloscope when a screwdriver will do the job, a researcher does not employ sophisticated analytical methodology when more well-known techniques may be realistically selected. Similarly, some analysis procedures may not be appropriate techniques for display of data when the statistical background of policymakers and administrators is considered. Depending upon the methods chosen for analysis of follow-up information, the results may be quite different.

This is not to imply that definitive statistical presentations have no place in follow-up reporting or that reports should be prepared with only rudimentary descriptive factors. On the contrary, as follow-up methodology evolves to a more complex plane, the use of inferential statistics will no doubt play a more important and universal role. In the meantime, however, a system of data analysis administered rationally and judiciously can keep the results functional and help assure higher levels of data consumption.

INTERNAL EVALUATION

An inherent component of any successful follow-up program is a system of internal evaluation. It is important to the health of the entire follow-up system that goals, techniques and outcomes be continuously checked and periodically assessed. This means that all activities should undergo evaluation, including the system as a whole. The features and components previously presented: involvement, broad data base, etc., are key points to check when evaluating the system. Naturally, allowances must be made for other features if a true picture of the system's effectiveness is to be obtained. However, the entire follow-up program, just like the educational system it monitors, is best checked and altered by noting whether results are used. Simply stated, if results are not utilized, then possibly changes in the system should be made.

CHAPTER II

PREPARING AND PRESENTING FOLLOW-UP INFORMATION

Follow-up studies, like other educational endeavors, should be well planned from start to finish. The overall purposes and objectives should be firmly established and adhered to throughout the program. Careful analysis and preparation of the returns, coupled with efficient reporting procedures, will facilitate the utilization of follow-up findings.

Factors affecting methods of tabulation, analysis, and presentation of follow-up information are naturally quite varied and diverse. Such factors generally center around the scope of the study, financial and physical resources, size of county or institution involved, and commitment of significant personnel. Because the circumstances surrounding each study are unique, it is essential to determine what means are most appropriate for the completion of program objectives.

It may also be observed that follow-up coordinators are no longer the only persons who must prepare and present reports dealing with particular aspects of follow-up. Department heads, curriculum specialists, as well as vocational deans and directors are occasionally required to incorporate follow-up information into various reports and presentations. For example, a department head must report to his or her superiors any desired programmatic revisions substantiated by documented data, including follow-up results. The follow-up coordinator may be called upon for further consultation and additional information is often presented. So, it is important to note the procedures and processes involved in the preparation and presentation of follow-up information from both functional and theoretical viewpoints.

TABULATING RESULTS

The tabulation and compilation of follow-up responses are the initial tasks to be performed once an adequate number of returns are received. As previously mentioned, several variables may determine the means by which results are best tabulated. With respect to both time and cost involved, very small surveys (under 75 returns) are typically best tabulated by hand. A tally sheet must be utilized which allows responses to be transferred from instruments and subsequently analyzed.

Larger studies may also have to be recorded by hand if electronic equipment is not available, although the process may become unwieldy. The sheer bulk and volume of returns from a large study almost necessitates the utilization of data processing equipment. Computerization of results also increases accuracy and flexibility, two conditions vital to the construction of meaningful reports. The transfer of results to punch cards is usually handled by one central agency for all vocational education data in school districts; however, if other or additional processing is performed locally, a program must be developed so that responses may be properly coded, tabulated and processed.

SUMMARIZING RESPONSES

Once responses have been tabulated, summaries and trends in the information can be identified. It is important to note that follow-up results often tend to reveal gross conditions and are not exact, finite measures. In fact, many educators employ follow-up results in certain instances as broad, general indicators of the condition and health within a given institution or school district. If the utilization of information on a gross scale is the intent of a particular study, then a brief summarization of results may be the analysis procedure that best displays the information.

Responses to studies requiring more definitive information can be analyzed and displayed in more detail by crosstabulation of selected variables involved in the study — age by occupational area, for example. In addition, responses may also be analyzed by more traditional processes such as histograms, percentages, means, and tallies.

PREPARING FOLLOW-UP REPORTS

When data are sufficiently tabulated and analyzed, then the preparation of follow-up reports may begin. A well conceived follow-up report will, of course, portray the results revealed in the study. However, the report will also facilitate communication of the procedures undertaken to gather, analyze and present the results. Further validity is lent to the data when consumers of the reports are cognizant of the processes that take place during the collection of the information.

PLANNING REPORTS

It should be noted at this point that a discussion of the many techniques for research reporting is a formidable task in itself and well beyond the purposes of this section. One of the many works on survey and research reporting may be checked for more definitive discussions of this important subject.

However, a brief discussion of major report components normally utilized may help clarify this essential component of the follow-up process. Reports can best be formulated and produced if they are planned and organized around several major aspects of the follow-up study. An analysis of reporting procedures usually includes the following major sections or parts:

1. **Introduction** — States the aims, goals, and target audiences of the report, while setting the stage for the remainder of the presentation.
2. **Methodology** — Describes the scope and limitations of the study, respondent populations, instrumentation, and procedures used to conduct the investigation.
3. **Outcomes and Results** — Reports the results of the analysis of gathered information. Results may be displayed in combinations of narrative, graphic, or statistical forms.
4. **Conclusions** — Interprets and discusses the results in relationship to major findings and limitations, and usually concludes with recommendations.

Due to the fact that most follow-up studies are conceived and administered differently, the reporting formats may also vary considerably. However, since vocational education data collection instruments are essentially the same, report formats can be organized around similar categories of activity. Regardless of the format chosen for a report, all major aspects of the study must be presented in a logical, explicit manner.

WRITING REPORTS

Actually writing the follow-up report is the next procedural step after preparation and planning are completed. Several considerations in addition to report design must be considered if results are to provide maximum impact.

Proper writing style, for example, is a critical factor in effective research writing and must be refined to a point that the writer conveys an intended meaning while attempting to be as objective as possible. Personal biases and editorial judgements must be avoided and only the apparent facts of the study reported. Word structure should be direct and to the point, with precise and proper terminology utilized at all times.

Additional considerations when preparing reports may be examined in the following list compiled from selected follow-up coordinators and certain administrators who actively utilize follow-up reports.

TIPS TO DECISION MAKERS ON PREPARING REPORTS

1. Include the survey instruments in all reports and presentations, if possible.

2. Set up local reports as desired, but include information required by state and federal mandates.

3. Break out and analyze data as much as possible, but not all information and analyses need be presented to everyone.

118

4. Make tabular summaries in the shortest possible form. Oral presentations are best with this type of information. Follow survey form design when making presentation, question 1, 2, 3, etc.

5. Prepare and present a copy of the report for each member of the audience during oral presentations, if practical. Be sure to present data in the form and content applicable to the particular audience.

6. Summarized reports are usually the best format for presentation to most groups, however more definitive information is required in certain instances.

7. The comments section of a survey instrument is very important. This area many times reveals needs and shortcomings, especially if a particular comment is repeated several times.

8. Scan the comments section for the most frequently mentioned items, and make summaries for inclusion in reports and presentations. Refrain from using actual names (teachers, administrators, etc.) given in comments.

9. Do not attempt to include survey information from a student surveyed in the wrong curriculum area. For example, students are sometimes included in vocational surveys who may have taken only one vocational course, and are in fact pursuing college prep courses. Their inclusion in a vocational survey biases the information and raises the standard error.

10. Data tabulation and analysis methods must be appropriate, or non-use of the data is assured.

11. Break out district data on a per school or program per campus basis. Most administrators are interested in information about their institution and their graduates. Compare schools to county data, or program to college data, but avoid institution to institution comparisons.

12. Break out data by program, where applicable. This format is very meaningful for vocational reports and presentations. It gains teacher support for the activity.

13. Compare and present data on courses and programs, not teachers. Many students react to questions about courses or programs by the nature of his/her relationship with a teacher, which biases the data.

14. Keep any sophisticated statistics in a separate section for those who wish to review them, but do not present statistics throughout a report. Rates of use will go down, especially in audiences with little or no background in research methodology.

15. Percentages, graphs and charts are information display methods to which most populations can best relate.

16. The main use of follow-up information as it currently exists is to display general indications of the condition of an institution, district, etc. Include an abstract of each report that summarizes these findings and gives a brief description of the information gathering analysis techniques.

17. Make sure reports appear neat, are printed on good quality paper, and are in readable form.

DRAWING CONCLUSIONS AND MAKING RECOMMENDATIONS FROM FOLLOW-UP REPORTS

Once the evaluation section of a report has been completed, conclusions and recommendations should be made regarding changes, modifications, and general projections for future programs. A good set of conclusions and/or recommendations makes it more likely that some impact on policy and decisions will be realized. Recommendations which are actually utilized may influence programs and related conditions for a considerable period of time, so needless to say, biased and capricious viewpoints should be carefully screened from all reports.

The final follow-up report should formalize interpretations made by those involved with collection and administration of the study. It should be noted that no matter how precisely or scientifically a study is conceived and carried out, conclusions from the study are still statements of judgement based on a synthesis of information gathered for a specific purpose.

Of course conclusions carry a lot of punch since they are backed by definitive research procedures for data collection, manipulation and analysis. However, it is the decision maker's responsibility to consider conclusions in light of how they were generated. Moreover, effective decision makers must also consider the social and political climate which exists in an institution or school district before conclusions can be acted upon.

While no concise formula for drawing conclusions appears to exist, certain fundamental components of the process are readily apparent. These steps, depending upon the situation, usually include the following items:

1. **Discussion** — Discuss basic findings with all relevant persons involved with the follow-up program. Develop general view-points toward tentative conclusions.
2. **Develop Preliminary Conclusions** — Check to see that preliminary conclusions are supported by data and are compatible with the goals and objectives of the study.
3. **Edit Conclusions** — Review and alter conclusions in light of original goals and objectives of the study. Check that conclusions are stated in a concise, simple style that conveys only the intended meanings.
4. **Review Conclusions** — Appropriate personnel should review conclusions and make final preparations for those conclusions that will appear in the final report.

Recommendations based on conclusions are included in follow-up reports as possible plans of action for modification of any undesirable conditions. It also appears to be a common practice to include recommendations other than those based upon conclusions from the study. If this practice is utilized, care should be taken to note recommendations based upon opinion as compared to those based on conclusions. Authors of reports may wish to document opinion-based recommendations so that the reader is aware of both the origin and authority in a school system advocating such views.

PRESENTING FOLLOW-UP INFORMATION

Follow-up reports are servants of an institution or agency and serve in varied capacities; consequently, the delivery of data will differ in each situation. Since any follow-up system should be initiated for a definite purpose, the report presentation should state and summarize those objectives at the outset. Reports may be used internally or they may be disseminated to external parties. Here again, the purpose and objectives of the follow-up study will indicate the report audience.

Although reporting procedures and techniques for the interchange of information vary from county to county or institution to institution, certain basic considerations are common in most situations. The following list, again developed from follow-up coordinators and administrators currently in the field, summarizes considerations to bear in mind when involved in report presentations.

TIPS TO DECISION MAKERS FOR PRESENTING FOLLOW-UP INFORMATION

1. Present data to as many appropriate groups and individuals as possible.

2. Go through the proper chain of command when presenting data — school board or board of trustees, superintendent or presidents, administrators, etc., where applicable.

3. Although many follow-up reports are prepared for boards of education, most utilization of the information is done on a school or program basis, so the appropriate administrator should be utilized at various levels in a school or college.

4. Send reports to Chambers of Commerce. They can use the summarized data for explanations of local conditions.

5. Talk directly to teachers where applicable. When data indicate a problem, a solution can be found many times by going directly to the heart of the problem (teacher, principal, program manager).

6. When making oral presentations, cover areas most important to the audience and discuss thoroughly if need be.

7. Send an accompanying form with follow-up reports to be filled in by the recipient of the report showing who used the data for what, how, etc. This is an excellent way to see who is using the data so that they can be sure to receive more. It also encourages administrators to utilize the information more thoroughly.

8. A considerable amount of public relations is involved with the presentation phase of the follow-up process, so make sure the importance of utilizing data is encouraged.

9. Many reports are involved in comparisons, so have state, district, and institutional data available for some presentations. Make sure that copies are available for everyone, if possible. However, one should avoid school to school and college to college comparisons.

10. When presenting information to a board of education, report only the aspects that are of immediate interest. Most follow-up information is not related to board policies.

11. Send data and make presentation to the Citizen's Advisory Council. They are an influential group. However, do not attempt to display controversial information that might cause problems with boards of education or administrators.

12. Other agencies that can use follow-up information include the State Employment Service, Vocational Rehabilitation, CETA, Social Services, and Mental Health. The spin off value of follow-up is relevant in all these areas.

CHAPTER III

CHANGE AND INNOVATION THROUGH THE USE OF FOLLOW-UP INFORMATION

Vocational education, as one aspect of the overall social institution of education, is vastly influenced by the forces of change. The functions and missions of vocational education, as well as the educational process in general, are becoming increasingly more complex and comprehensive. For example, vocational programs must be sensitive to the performance requirements of the free marketplace and employers. They must be attuned to the labor market in which laws of supply and demand for marketable skills operate. It appears that no other types of educational programs are as radically affected by fluctuations in market, economic, and related social conditions as are those in vocational education.

Since change is an ever present aspect of vocational education, it is essential to note the relationships between the use of follow-up information and resulting programmatic modifications. It is not the intent of this section to present the role of change agents, general strategies for change, or impact and time spans for change. These topics are well beyond the dimensions of this publication and may be readily referenced in the many works pertaining to educational change.

This section will delve into selected methods and processes employed to effect programmatic change and improvement through the utilization of follow-up information. Actual on-the-job examples of how follow-up data have been used to alter or modify programs will be presented. While follow-up information is rarely employed as the sole criterion for needed change, it nevertheless substantiates certain conditions and plays a crucial part in laying the groundwork for program modification. So, it is important to note how follow-up data may be employed as an essential element in the change process.

THE CHANGE PROCESS

The question of change with respect to follow-up information seems to be: How can vocational education programs be initiated, modified, or deleted so as to impart to students the skills and knowledge necessary to allow both entry-level employment and job advancement in the world of work? A question of such breadth encompasses many possible solutions and answers; it does, however, reveal the complexity involved with effecting change in local programs of vocational education

Plans and strategies designed to improve vocational offerings must take into account the innumerable events, trends, and variables that occur in the community at large. Furthermore, state and national events, both political and social, can have significant impact on vocational administrative direction and leadership.

Information related to change in vocational education seems to indicate that the use of any single change strategy as a panacea for all ills is dangerously shortsighted and potentially disasterous. Conversely, an overreaction to the forces and pressures of change may seriously alter the scope and relevance of a student's program and subsequent career choice. The proliferation and emergence of innovative programs appears to characterize the moods of contemporary society. Educational planners must be cognizant of these forces to the point where the advantages of program diversity offered to students are not cancelled out by the complexities of career decision making processes.

Certain vocational educators perceive change as a long term, comprehensive affair that will ultimately result in extensive modification of current course offerings. Others view change in a context of cautiously adapting or adopting small-scale innovations. Extremists in either direction tend to be in the minority; most educators advocate change from a centrist or moderate viewpoint.

Many vocational educators seem to deal with programs and areas which can easily be changed and rarely get involved in an assessment of what they actually do, or fail to do. This administrative philosophy tends to be geared toward the status quo, while giving lip service to more pervasive change. For example, changing from one textbook or workbook to a different, more recent edition is a relatively simple task. On the other hand, adoption of a new experimental curriculum requires considerable planning and coordination, since attitudes, behavior patterns, and instructional methods must be modified. Perhaps ironically, the literature tends to support the position that a strategy of planned change that is characterized by comprehensiveness in its approach seems to have greater probability for success than one which is less so.

In summary, there are innumerable factors, components, elements, and variables associated with the change process. The preceeding brief discussion of change attempted to portray the complex nature of educational change that must be considered by educational planners. The utilization of follow-up data to effect change is merely one segment of the total process of change, but should never be underestimated as a crucial component for assessing the needs and relevance of vocational programs.

UTILIZATION OF FOLLOW-UP INFORMATION FOR CHANGE

As stated throughout this report, no magical formulas or hard and fast rules for successful use of follow-up information currently exist. It seems that those who both generate and use follow-up data find it difficult to translate their successes into exact procedures for others to emulate.

However, the following actual examples were drawn directly from the field and may be considered valid instances where follow-up data were employed by decision makers. These examples were selected as representative of the many types of change occurring within the schools and may possibly be considered as "typical." It should be reiterated that the current use of follow-up information is typically situational, and instances described in the following paragraphs may pertain to programs or components available only in certain institutions or school districts.

EXAMPLE 1

During one of the recent follow-up studies, a very high number of open-ended comments were received from recent LPN graduates regarding their "uneasiness, fear, and overall lack of confidence" in administering prescribed medications. This feedback was transcribed and, along with other tabular analysis for this specific course, put into a short report forwarded to the training center's Program Coordinator for Health Occupations.

Immediate action was taken to call together the professional staff and aids instructing in the LPN area for a review of the existing curriculum. Reference was made to the recent input from working graduates. As a result, classroom instructional time and on-the-job training were increased in the area of medications. There have not been any similar comments by LPN graduates since this curriculum revision.

EXAMPLE 2

After initially reviewing a tabular summary for a course in Medical Office Assistant, there appeared to be some concern about recent graduate job placement rates. The collected data indicated that 40% of the class were no longer available for placement because they "could not get a job in this field." In addition, a high unemployment rate of 30% (of those available for work) was indicated by this survey sample.

These indicators seemed to be highly irregular due to the following conditions:

1. Local conditions were found to be advantageous for health occupations placements.
2. These data were inconsistent with previous placement rates for this course which had always been high.
3. The instructor had proven his/her competencies with high quality evaluations from both supervisors and former students.

Through a discussion with the instructor, it was discovered that the root of the problem was not job placement availability, but rather course recruitment and screening of prospective students. Students being accepted did not have the proper business/clerical skills which were prerequisites to the medical office practice taught in this course.

This problem was remediated by putting the MOA instructor in contact with business education students. A career presentation was then given by the MOA instructor (assisted by the occupational specialist) to seniors in secretarial programs. This resulted in the enrollment of highly interested students who had the necessary secretarial skills and could, therefore, give emphasis to the specialized practices of medical office assisting. In addition, the business education teachers were highly interested in adapting parts of their curriculum to medical office terminology, record-keeping and other related MOA skills. As hoped for, subsequent follow-up surveys found much higher rates of placement in the Medical Office Assistant Program.

EXAMPLE 3

Employer surveys from a small community college revealed that some graduates of business programs were failing the minimum typing performance standards required in certain occupations. The head of the business department checked all typing programs and noted that testing procedures for typing speed and accuracy were not consistent with those used in business and industry. The words-per-minute rates were somewhat higher in classroom tests, and consequently some students failed the minimum performance standards demanded in certain job situations.

Consultations were held between the business staff members and individuals from government, business and industry to develop guidelines and procedures for teaching and testing typing skills to match those often required on the job. Subsequent follow-up surveys have revealed a sharp drop in adverse comments pertaining to insufficient typing skills.

EXAMPLE 4

At a large comprehensive high school, results from county and school follow-up surveys were summarized and reported in the principal's annual report to parents. The principal, having a very positive orientation toward an open, democratic style of administrative policy, felt that exposure of this nature would more truly reveal the wants, desires, and current educational climate of the school. Furthermore, he felt that the inclusion of certain follow-up information in the report would prompt the faculty to be more responsive to the demands of students, parents, and the community.

As a result, without any administrative decree, several department heads met with their departments and initiated a full scale investigation of departmental curricula. Since certain course offerings were perceived by a majority of responding former students as being "little or no help" in preparing them for careers in "real world situations," modifications in curricula were made after consultations with teachers and administrators. Subsequent follow-up studies show that the number of courses marked negatively has sharply declined.

EXAMPLE 5

Located on an area vocational-technical center campus is a laboratory serving all students referred for diagnostic work evaluations. The evaluation process is one incremental step in a controlled, measurable environment (lab) using only "hands on" experiences which are problem solving in nature. The outcome is to determine the appropriate setting where the individual can, and would like to, function best.

After the evaluations, recommendations for vocational training or job placement are made by the Evaluation Lab Coordinator. Usually a proposed staffing takes place with the work evaluation recommendation being accepted or rejected by the parties involved.

In many cases a vocational training or OJT placement is the outcome, and in these cases there is a need for follow-up data. These data would act as an indicator by broad inference of the success or failure of the original work experience placement recommendation. Specifically, the Work Evaluation Lab needs to know:

1. Was their original recommendation acted upon? Was the vocational program completer (person being surveyed) placed into an occupation and was the placement related to the original work evaluation recommendation?
2. Any comparisons between students from the Work Evaluation Lab and other groups of similar characteristics, i.e., related placement rates for EMR Work Experience graduates who, (a) had used Work Experience Lab facilities and (b) had not been through a work evaluation.
3. Indicators of student job satisfaction.
4. Indicators of on-the-job success such as preparedness of essential skills, interaction with peers, and reaction to criticism.

By checking each year's vocational survey master control list, the Work Evaluation Coordinator can identify previous students. A code can then be entered onto any survey form received from this group and a separate item analysis can be tabulated. Thus, follow-up information can be used as an indicator of previous work evaluation success.

EXAMPLE 6

The follow-up coordinator in a large county took particular notice of former students' negative responses which rated procedures and personnel of the dean's office in a large high school. The problem was called to the attention of the dean and the principal who discussed alternative strategies for change.

The administrators elected to involve the Citizen's Advisory Committee, and the entire group chose to implement a more detailed study of parents' opinions and attitudes toward the situation. The former students' opinions were supported by the additional study, and the personnel and procedures of the dean's office were adjusted accordingly. Ensuing follow-up studies show a positive change in the attitude of students, parents and faculty toward the new modifications.

EXAMPLE 7

A comparison of employment areas from several years of follow-up studies in a large metropolitan high school revealed that many graduates elected to go into business, yet the curriculum in business and related areas was quite limited. A check of open-ended comments disclosed that students were dissatisfied with the existent business program and desired more comprehensive and diverse offerings.

Administrative consultations resulted in additional funding for the area, and there was such a succeeding increase in interest and enrollments that two additional instructors were required. Higher enrollments for the following year continued to substantiate more agreement with the new changes in the program.

EXAMPLE 8

Enrollments in a machinist program at a small vocational school had been steadily declining for three successive years and had reached such a low level that the entire program was about to be phased out. While considering the fate of the program, the director checked follow-up information to note if any trends might appear. Student comments revealed that many graduates complained of poor facilities and the use of obsolete, run-down equipment. Employer data indicated that most graduates had to be extensively retrained, apparently due to the minimal skill training within the program. Additional checks of employment trends and graduate placements, however, revealed that a definite need for machinists existed in the community.

Through consultations with other administrators and representatives from the State Department of Education, a decision was reached to attempt to revise and update the program. A state grant was obtained to aid in the revision of curricular material, and a federal grant was also awarded to increase funding for new equipment and facilities. Input from the local vocational advisory committee was elicited and utilized during the renovation of the program. The program now places a very high percentage of its graduates in jobs for which they are trained, and negative comments about the program have markedly decreased.

EXAMPLE 9

A three year review of follow-up results from a medium sized high school revealed that many graduates were employed in food service or related occupations. Since the school was located in a community heavily oriented toward the tourist trade, the situation did not warrant any undue concern.

Ironically, the school offered no programs in food service occupations, with the exception of general food and nutrition courses available through the home economics department. The principal, in conjunction with the follow-up coordinator and occupational specialist, agreed to make an additional study of the student population to determine the extent of interest in food service occupations. Results of the study disclosed that interest in this occupational area was in fact quite high, especially among males who had previously been reluctant to enroll in the general home economics courses.

Consultations among administrators and the home economics staff resulted in the institution of a food service program for wage earners in place of the traditional general food courses. Both students and faculty have responded favorably to the changes, and the number of males entering the program has greatly increased. The program has become so successful that an additional instructor was hired and the program expanded to include additional offerings.

EXAMPLE 10

Recent follow-up studies from a medium sized high school revealed that many students were locally employed in agriculture and related occupations. This situation was not considered abnormal since the school was located in the heart of the citrus belt. However, the situation came more into focus when open-ended comments from both graduates and current students indicated a desire for more comprehensive offerings in agriculture.

Through discussions with the occupational specialist, business leaders, and students, the principal determined that a need for workers trained in various agriculture occupations did in fact exist, and this need was not being met by any programs currently being offered. The problem was called to the attention of appropriate State Department of Education personnel, who concurred that the problem existed and aided in the establishment of a comprehensive agriculture program. Consistently high enrollments in the agriculture program have been realized, with corresponding high rates of placement in the area of instruction.

EXAMPLE 11

Information from annual vocational employer surveys in a large school district revealed that employers frequently commented that graduates lacked essential employability skills. A closer look indicated that some students did not know how to fill out an employment application properly, conduct themselves at a job interview, or keep a job once they found one.

The vocational director, appropriate administrators, and occupational specialists met and formulated a plan to better prepare students for entering into the job market. In several large high schools "employability skills" is now offered as a separate course on the ninth or tenth grade levels. Furthermore, every high school, regardless of size, instituted a unit of employability skills in certain academic and all vocational classes. These units are taught by both occupational specialists and/or vocational teachers, depending upon the situation. The program has met with favorable comment from both employers and students, and survey data have tended to substantiate the changes.

INCREASING THE USE OF FOLLOW-UP INFORMATION

Increasing the use of follow-up information can perhaps best be accomplished when one develops a positive philosophy toward the follow-up process in general. When one sees the value in follow-up processes, there is, of course, more likelihood that the products of the program will be utilized where appropriate. The examples of data utilization presented in the previous section were included to show, among other things, the broad applicability of follow-up material. While data are collected under controlled conditions, they have both general and specific applications in many areas of education. The following list, again compiled from administrators and decision makers in the field, depicts some of the general principles and conditions which may be considered when attempting to use follow-up material.

TIPS TO DECISION MAKERS FOR INCREASING THE USE AND APPLICABILITY OF FOLLOW-UP DATA

1. Follow-up information tends to be very situational, and its use in a wide variety of educational settings supports this contention.
2. The entire area of follow-up is a relatively recent phenomenon, so there are few concrete standards or rules to aid in use of the data on the local level.
3. No definite standards on how to collect, analyze, or utilize the data currently exist. The state and federal governments have certain formats which must be adhered to, but use of the data is still basically a local matter.
4. Some administrators and teachers are still not sold on the idea of follow-up, so the benefits of the program must be revealed if information is to be effectively utilized.
5. Certain administrators and teachers feel threatened by follow-up studies because a more revealing look at the conditions in selected institutions is available.
6. Many times there is no follow-through on follow-up products. Studies may indicate certain areas of concern, but it is the job of the appropriate administrator to use the information to make needed change.
7. Change usually takes place on the school and classroom levels, so be sure to involve all personnel that might be affected by changes.
8. Time is a very important consideration in the use of follow-up information. Follow-up is a slow process. If a significant trend or point in the data appears to emerge, check it out with information from as many sources as possible. It may take several years for significant trends in the data to appear.

9. Follow-up information is many times used to substantiate quality programs and positive situations and should not be viewed solely as a program designed to reveal weaknesses.

10. There is usually a very substantial correlation between follow-up data pertaining to job placements and labor market trends, so be sure to check all relevant information before making decisions.

11. Follow-up information tends to reveal what kind of courses and programs students should not be trained in, but it is not so precise in being able to note what alternative courses should be offered. Develop the ability to look at the total picture and use additional data from various sources.

12. The current state of refinement in the follow-up process calls for *very close* analysis of information related to teacher effectiveness. Students tend to rate courses high when they like the teacher, and vice versa. Conversely, teachers rated highly may not be effective, and those rated low may be excellent teachers.

13. Follow-up data many times provide the impetus for change but are rarely the sole cause of or basis for change. Information must be gathered from as many sources as possible before taking action.

CHAPTER IV
SUMMARY

Follow-up systems are now firmly established in most school districts and community colleges throughout the state. While some educators are still leery of the follow-up concept, most no longer discount it as another educational fad that can be ignored pending its anticipated disappearance. Sections of the 1976 Federal Vocational Amendments and Florida State Statutes as well have provided additional impetus to the value of utilizing follow-up material.

Follow-up programs have been plagued with certain traditional problems that have hampered the effectiveness, validity and growth of the area. No doubt many of these issues will diminish as follow-up methodology becomes more refined and receptive to the needs and requirements of decision makers. Certain components (commitment, sound analysis techniques, etc.) appear to be related to successful follow-up programs. As expected, effective and innovative use of data appears to be closely correlated with a well designed and administered follow-up program.

The examples describing actual use of follow-up information seem to indicate that the applicability of follow-up material is so flexible that even the most innovative administrators can be accommodated. In fact, new innovations and directions in data utilization are currently under experimentation by various persons around the state.

The argument for or against the value of follow-up programs no longer seems relevant. Follow-up is here, now! There is no doubt that the follow-up process is a massive undertaking. But neither is there any doubt about the benefits that will result. There will always be the unconvinced who view current educational procedures as perfection and proceed on the assumption that whatever is, is right. Ignorance and fear of change have always been an integral part of those committed to the status quo. This set of circumstances alone is probably the major reason why some educators have been skeptical of follow-up programs. Many people around the state are working to eliminate this situation by illustrating the value of utilizing follow-up information in education.

SECTION V

PLACEMENT AND FOLLOW-UP REPORT FORMATS

All of Section V, except for the bracketed material, is from *Community College Management Information System Procedures Manual* (State of Florida, Department of Education, Division of Community Colleges, 1980).

THE FLORIDA PLACEMENT AND FOLLOW-UP SYSTEM

[The *Community College Management Information System (CCMIS) Procedures Manual* identifies the annual placement and follow-up reports required to be filed with the Florida Division of Community Colleges. The purpose of these reports is to provide placement and follow-up information on each program offered by the college. Collected information is used by program managers, academic officers, the Division of Community Colleges, the Department of Education, and the state legislature. It is also used for completing federal reporting requirements.

Current (as of September, 1980) report forms and their descriptions, from the *CCMIS Procedures Manual,* appear on the following pages. These report formats are subject to revision as reporting requirements change. Each description includes procedures for data collection and lists the types of data collected. Relevant Division of Community Colleges forms are identified by both title and corresponding alpha-numerical designation.]

ANNUAL HEADCOUNT REPORTS (AA-1, EA-3)

This section contains those reports and instructions dealing with annual enrollments and terminations. The AA-1/EA-3 Series provides information about PROGRAM ENROLLMENTS AND TERMINATIONS. Each report in this series is listed and identified below:

Report Identification	Report Name
AA-1A	Program Enrollments and Terminations (Advanced and Professional, Occupational Programs)
AA-1B	Undecided Enrollments
AA-1C	Supplemental and Apprenticeship Enrollments
AA-1D	Special Sections Enrollment (Vocational)
AA-1E	First-Time-in-College, Early Exit, GED Students
EA-3	Developmental, Community Instructional Services, Other Personal Objectives Enrollment

PROGRAM ENROLLMENTS AND TERMINATIONS

AA-1A

PURPOSE OF THE REPORT

The purpose of this report is to provide a program-by-program accounting of student enrollments and terminations. The college should prepare a separate form for *each* program of study offered by the college. This information is used by the Division of Community Colleges to prepare reports for the Department of Education (Division of Vocational Education) and Legislature, and to prepare Federal and regional reports for each college. These reports include Office for Civil Rights (OCR) Fall Enrollment and Compliance, Higher Education General Information Survey (HEGIS) Earned Degrees, and Vocational Education Data System (VEDS).

GENERAL INSTRUCTIONS

TIME FRAME COVERED BY THE REPORT

The data for this report are for the prior academic year which begins with the Fall semester and ends with the completion of the Summer semester.

DUE DATE FOR THE REPORT

Refer to the Chart of Reports in Section 1 [of the *CCMIS Procedures Manual*].

DEFINITION OF PROGRAM STUDY

This is a group or combination of related courses, self-contained classes, or instructional units organized for the attainment of specified educational objectives. *Each* program must be reported on a separate form so that the Division can complete the required Federal reports. Programs designed for transfer (or university parallel) purposes may be considered one program for this report. However, it is preferable that these programs be identified to one of the other eight clusters indicated on page 2.10 [of the *CCMIS Procedures Manual*]. A vocational preparatory program consists of a course or a group of related courses and instructional activities through which students can achieve the competencies required for entry into an occupation or a cluster of closely related occupations. The college must obtain the program objective of each student each time he or she registers. Procedures should be developed by each college to obtain an accurate statement of student intent. Those students who have demonstrated no intent to complete a curricular program offered by the college, but who are taking credit courses to satisfy their personal objectives, should be reported on the EA-3 report form as "Other Personal Objectives Enrollment."

For the purpose of this report, do not include as a program of study those supplemental courses offered by the college. These courses are primarily designed for job skill updating and retraining of those persons already employed in the field and these should be reported on the AA-1C report.

A separate special form (AA-1B) has been included for those students that have *not decided* (Undecided) on the program of study which they will pursue or have *not been accepted* into a limited access program (e.g., dental hygiene). Do not include A.A. degree seeking students who have not selected a major. These persons should be included in 1.19 General Degree Transfer. It is important to note that this form does not provide for "Completions" since each graduate (completer) must be identified with a program of study.

NEW PROGRAMS, PROGRAM CHANGES, PROGRAM DELETIONS

These actions should be reported on the AA-1A form *with appropriate notation* to indicate the kind of action. When these take place at other than initial submission of the AA-1A reports, a letter of explanation should accompany.

DETAIL INSTRUCTIONS

PROGRAM INFORMATION — TOP PORTION OF THE FORM

Program Code

This is the eight-digit code which identifies each program offered by the college during the academic year being reported. These codes are found in the Community College Information Classification Structure. Refer to the documentation in Appendix A of the *CCMIS Procedures Manual* to verify coding or to assign codes to new programs.

Program Title

This is the title which the college uses for the program. Note that the Program Code and Program Title shown in the Program Inventory printout will be used until a change is submitted.

New Program

Indicate "X" if yes. Ignore, if not a new program. This will provide information about the number of new programs initiated by the colleges.

Correction

Indicate "X" if yes. Ignore, if not a correction. This data item will facilitate program change.

Occupational Program Type

An occupational program is one designed to prepare persons for immediate employment in an occupation (including homemaking). There are two *levels* of occupational programs offered in community colleges, namely:

A. **Postsecondary Technical (courses and programs of study)** This includes programs of study and their related courses designed to prepare persons for employment at the technical level which is between that of the skilled and the professional. These are usually two-year programs of study made up of college level credit courses which are, for the most part, transferable.

B. **Postsecondary Skilled/Semiskilled (courses and programs of study)** This includes programs of study and their related courses designed to prepare students for employment at a semiskilled or skilled level which is between that of the unskilled and the technician. These are usually clock-hour or institutional credit programs and courses.

Program Length

Enter the number of semester credit hours or clock hours required to complete the program.

Completion Award Type

Check the appropriate award type based on the *definitions* provided below, even though your college may use a different title for a degree or certificate:

A. **Associate in Arts** An award certifying the completion of a two-year lower division undergraduate program of study which is applicable to a bachelor's or advanced degree.

B. Associate in Science An award certifying the completion of a two-year technical program of study. In some cases students completing these programs transfer to a university to complete a higher level degree in the field. Therefore, the A.S. degree is not necessarily a terminal degree.

C. Technical Certificate An award certifying the completion of technical programs of study consisting principally of the prescribed specialized courses in the program area. These are programs which usually consist of one academic year of full-time study.

D. Associate in Applied Science An award certifying the completion of a two-year skilled/semiskilled program of study.

E. Certificate of Applied Sciences An award certifying the completion of a vocational program of study which is usually of a duration longer than one term (semester), but less than two years of full-time study.

F. Certificate of Training An award certifying the completion of a vocational program of study which is one term (semester) or less of full-time study.

COLUMN HEADING INSTRUCTIONS

The columns of the report provide for a distribution by sex and race for certain information items. This information is required for the OCR Earned Degree report and also is used as a part of the compliance report for the State plan.

Nonresident Alien

A person who is not a citizen of the United States and who is in this country on a temporary basis and does not have the right to remain indefinitely. Resident aliens, noncitizens who have been lawfully admitted for permanent residence (and who hold a "green card" Form 1-151), are to be reported in the appropriate racial/ethnic categories along with United States citizens. Nonresident aliens are to be reported separately, in the columns provided, rather than in any of the five racial/ethnic categories which follow.

Black, Non-Hispanic

A person having origins in any of the black racial groups of Africa (except those of Hispanic origin).

American Indian or Alaskan Native

A person having origins in any of the original peoples of North America, and who maintains cultural identification through tribal affiliation or community recognition.

Asian or Pacific Islander

A person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands. This area includes, for example, China, Japan, Korea, the Philippine Islands, and Samoa.

Hispanic

A person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.

White, Non-Hispanic

A person having origins in any of the original peoples of Europe, North Africa, or the Middle East (except those of Hispanic origin).

Racial/ethnic designations as used in this survey do not denote scientific definitions of anthropological origins. For the purpose of this report, a student may be included in the group which he or she appears to belong to, identifies with, or is regarded in the community as belonging to. However, no person may be counted in more than one racial/ethnic group.

The manner of collecting the racial/ethnic information is left to the discretion of the institution provided that the system which is established results in reasonably accurate data. One acceptable method is a properly controlled system of postenrollment self-identification by students. If a self-identification method is utilized, a verification procedure to ascertain the completeness and accuracy of student submissions should also be employed where feasible. In order to provide reasonably accurate data, the institution may require students to complete a questionnaire and/or identify themselves by name or otherwise when providing information. The fact that the information is being gathered in compliance with Title VI of the Civil Rights Act of 1964 and Title IX of the Education Amendments of 1972 may be disseminated in the manner and to the extent that the institution deems appropriate.

ROW HEADING INSTRUCTIONS

1. Unduplicated Count of Student Enrollments in the Program during the Academic Year

To obtain the unduplicated headcount for each program, use the most recent statement of each student's program objective or intention. Students who have not been admitted into a limited access program should be included on the special Undecided form along with those students who have not selected a program.

1A. **Cooperative Students (unduplicated)** Include in this section unduplicated enrollments of students reported in Row 1 in a program of vocational education who, by written (and on file) cooperative arrangements between school and employers, are employed and receive compensation, and receive instruction, including required academic courses and related vocational instruction by alternation of study in school with a job in any occupational field. However, these two experiences must be planned and supervised by the school and employers so that each contributes to the person's education and his or her employability. Work periods and school attendance may be on alternate half days, full days, weeks, or other periods of time in fulfilling the cooperative program.

2. Number of Students Who Completed the Requirements to Earn a Degree or Certificate during the Academic Year

"Completed the requirements" means a student either finished a planned sequence of courses, services, or activities designed to meet a vocational occupational objective and obtained entry-level job skills, or completed a program designed for transfer (university parallel).

REMAINING COLUMNS

Number of the Total Who Are High School Students

Refers to persons declared by the institution to be at the 11th- and 12th-grade levels who are enrolled in vocational preparatory programs *for which credit is given toward a high school diploma.*

Special Needs

Report in this section counts of persons in Columns 1 through 12 who can be identified as handicapped, of limited English proficiency or disadvantaged (economically or academically) using the definitions below WHETHER OR NOT SPECIAL SUPPORT SERVICES ARE BEING PROVIDED BY VEA (Vocational Education Act) FUNDS TO SUCCEED IN THE VOCATIONAL EDUCATIONAL PROGRAM. A person should be reported in each category for which he or she has a special need. If a person has all three special needs, he or she is reported once in each category.

DEFINITIONS

HANDICAPPED

Refers to a person who has a physical or mental impairment.

LIMITED ENGLISH PROFICIENCY

Refers to any member of a national origin minority who does not speak and understand the English language in an instructional setting well enough to benefit from vocational studies to the same extent as a student whose primary language is English. Some examples of national origin minorities are persons of Spanish, Chinese, or Italian heritage. The chief administrative official shall determine the method and the staff persons responsible for making the identification. Operationally, for example, enrollment in English as a second language could be used as a proxy here.

DISADVANTAGED

Means persons (other than handicapped) who meet the following definitions:

"Economically disadvantaged" refers to any of the following:

(1) Family income is at or below national poverty level,
(2) Participant or parent or guardian of the participant is unemployed,
(3) Participant or parent of participant is recipient of public assistance, or
(4) Participant is institutionalized or under State guardianship.

Operationally, economic disadvantage can be determined by reporting students who are participating in BEOGs or similar financial aid or work-study programs.

"Academically disadvantaged" refers to persons who:

(1) Lack reading or writing skills,
(2) Lack mathematical skills, or
(3) Perform below grade level.

Operationally, academic disadvantage can be determined by reporting students enrolled in remedial instruction or on academic probation.

> NOTE: While it is not necessary to identify program leavers on the AA-1A, it will be necessary to conduct follow-up on leavers as part of the AA-2 and AA-4 requirements. Therefore, provisions should be made to identify leavers as they are defined in the AA-2 instructions in Section 16 [of the *CCMIS Procedures Manual*].

DIVISION OF COMMUNITY COLLEGES
PROGRAM ENROLLMENTS AND TERMINATIONS

ACADEMIC YEAR:_________

Program (ICS) Code:_______________________
Program Title:_______________________
New Program:_______________________
College:_______________________
Campus:_______________________
CORRECTION:___________

Occupational Program Type:	Program Length:	Completion Award Type:
___ Post-Secondary Technical ___ Post-Secondary Skilled/Semi-skilled	___ Semester Credit Hours ___ Clock Hours	___Associate in Arts ___Associate in Science ___Technical Certificate ___Associate of Applied Science ___Certificate of Applied Science ___Certificate of Training

14.8

Data Categories	Non-Resident Alien		Asian or Pacific Islander		American Indian or Alaskan Native		Black (Not of Hispanic Origin)		Hispanic		White (Not of Hispanic Origin)		TOTAL	Number of the total who are high school students	SPECIAL NEEDS		
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male			Handi-capped	Limited English pro-ficiency	Disad-vantaged
1. Unduplicated count of students enrolled in the program during the academic year.																	
1A. Of the above, the number who are cooperative students																	
2. Number of students who completed requirements to earn a degree or certificate during the academic year																	

AA-1A

Prepared by:_______________________

Date:_______________________

State of Florida
Department of Education
Tallahassee, Florida
Ralph D. Turlington, Commissioner
An equal opportunity employer

Program Title: UNDECIDED

DIVISION OF COMMUNITY COLLEGES

UNDECIDED ENROLLMENTS

College: ______________________

Academic Year: ______________

NOTE: THIS PART OF THE REPORT INCLUDES ONLY THOSE STUDENTS WHO HAVE NOT REPORTED A PROGRAM OF STUDY OR HAVE NOT BEEN ADMITTED TO A LIMITED ACCESS PROGRAM.
DO NOT INCLUDE A.A. DEGREE STUDENTS. STUDENTS WAITING TO ENTER A LIMITED ACCESS PROGRAM WILL BE PLACED IN THE APPROPRIATE VOCATIONAL CATEGORY.

14.9

Data Categories	Non-Resident Alien		Asian or Pacific Islander		American Indian or Alaskan Native		Black (Not of Hispanic Origin)		Hispanic		White (Not of Hispanic Origin)		TOTAL	Number of the Total Who Are High School Students	SPECIAL NEEDS		
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male			Handi-capped	Limited English Pro-ficiency	Disad-vantaged
1. Undecided																	
1.99 Undecided																	
2. Students Waiting to Enter a Limited Access Program																	
1.21 Agriculture																	
1.22 Distribution																	
1.23 Health																	
1.24 Home Economics																	
1.25 Office Occupations																	
1.26 Trade & Industrial																	
1.27 Public Service																	

AA 1B

President's Signature: ______________________ Prepared by: ______________________ Date Prepared: ______________

SUPPLEMENTAL AND APPRENTICESHIP COURSE ENROLLMENTS
AA-1C

PURPOSE OF THE REPORT

This report is used by the Division of Community Colleges to meet VEDS reporting requirements relative to apprenticeship enrollments. The data are also entered into the Community College Management Information System so that they can be used along with other occupational enrollment data to respond to specific requests.

INSTRUCTIONS AND DEFINITIONS

COURSE CATEGORIES

These are the same categories used for occupational programs in the Community College Information Classification Structure. In this report relate each course to the appropriate category.

SUPPLEMENTAL COURSE ENROLLMENT

Enter the number of students who enrolled in courses that were organized for the purpose of upgrading persons who are currently, or who have been previously, employed in the occupational field. Students enrolled in more than one course category will be reported as an enrollment in each.

APPRENTICESHIP COURSE ENROLLMENT

Enter the number of students who have enrolled in a course providing occupational preparation for skilled trades as authorized by State and Federal legislation and usually conducted under the auspices of a joint apprenticeship committee representing labor, management, and the school.

DIVISION OF COMMUNITY COLLEGES
SUPPLEMENTAL
and
APPRENTICESHIP
COURSES ENROLLMENT
(ANNUAL)

ACADEMIC YEAR: ____________ COLLEGE: ____________

ICS CODE	COURSE CATEGORY	Enrollment in Supplemental Courses		Enrollment in Apprenticeship Courses	
		Female	Male	Female	Male
	AGRICULTURE				
1.21.0100	Agriculture Production				
1.21.0200	Agricultural Supplies/Services				
1.21.0300	Agricultural Mechanics				
1.21.0400	Agricultural Products				
1.21.0500	Ornamental Horticulture				
1.21.0600	Agricultural Resources				
1.21.0700	Forestry				
1.21.9900	Other Agriculture				
	TOTAL AGRICULTURE				
	DISTRIBUTIVE				
1.22.0100	Advertising Services				
1.22.0200	Apparel and Accessories				
1.22.0300	Automotive (Sales)				
1.22.0400	Finance and Credit				
1.22.0500	Floristry				
1.22.0600	Food Distribution				
1.22.0700	Food Services				
1.22.0800	General Merchandise				
1.22.0900	Hardware, Building Materials, Etc.				
1.22.1000	Home Furnishings				
1.22.1100	Hotel and Lodging				
1.22.1200	Industrial Marketing				
1.22.1300	Insurance				
1.22.1400	International Trade				
1.22.1500	Personal Services				
1.22.1600	Petroleum				
1.22.1700	Real Estate				
1.22.1800	Recreational and Tourism				
1.22.1900	Transportation				
1.22.2000	Retail Trade				
1.22.3100	Wholesale Trade				
1.22.9900	Other Distributive				
	TOTAL DISTRIBUTIVE				
	HEALTH				
1.23.0100	Dental				
1.23.0200	Medical Laboratory Technology				
1.23.0301	Associate Degree Nursing				
1.23.0302	Practical (Vocational) Nursing				
1.23.0303	Nursing Assistance (Aide)				
1.23.0304	Psychiatric Aide				
1.23.0305	Surgical Technician				
1.23.0306	Obstetrical Technician				
1.23.0300	Other Nursing				
1.23.0400	Rehabilitation				
1.23.0500	Radiologic				
1.23.0600	Opthalmic				
1.23.0700	Environmental Health				
1.23.0800	Mental Health				
1.23.0900	Miscellaneous Health Education				
1.23.9900	Other Health Occupations				
	TOTAL-HEALTH				

AA-1C
Rev. 8/1/79
Page 1 of 3

14.11

SUPPLEMENTAL
and
APPRENTICESHIP
COURSES ENROLLMENT
(ANNUAL)

ACADEMIC YEAR: ____________ COLLEGE: ____________

ICS CODE	COURSE CATEGORY	Enrollment in Supplemental Courses		Enrollment in Apprenticeship Courses	
		Female	Male	Female	Male
	HOMEMAKING				
1.24.0101	Comprehensive Homemaking				
1.24.0102	Child Development				
1.24.0103	Clothing and Textiles				
1.24.0104	Consumer Education				
1.24.0105	Family Health				
1.24.0106	Family Relations				
1.24.0107	Foods and Nutrition				
1.24.0108	Home Management				
1.24.0109	Housing and Home Furnishings				
1.24.0100	Other Homemaking				
	TOTAL HOMEMAKING				
	OCCUPATIONAL PREPARATION				
1.24.0201	Care and Guidance of Children				
1.24.0202	Clothing Mgt., Product. & Serv.				
1.24.0203	Food Mgt., Product. & Services				
1.24.0204	Home Furnishings, Equip. & Serv.				
1.24.0205	Instit. & Home Mgt. & Serv.				
1.24.0200	Other Occupational Preparation				
	TOTAL OCCUPATIONAL PREP.				
	OFFICE				
1.25.0100	Accounting				
1.25.0200	Business Data Proc. Systems				
1.25.0300	Filing, Off. Mach., Clerical Occup.				
1.25.0400	Information Communication				
1.25.0500	Materials Support				
1.25.0600	Personnel and Training				
1.25.0700	Stenographic and Secretarial				
1.25.0800	Supervisory and Admin. Mgt.				
1.25.0900	Typing				
	TOTAL OFFICE				
	TRADE & INDUSTRIAL				
1.26.0100	Air Cond. & Environ. Control				
1.26.0200	Appliance Repair				
1.26.0300	Automotive Services				
1.26.0400	Aviation Occupations				
1.26.0500	Blueprint Reading				
1.26.0600	Business Machine Maintenance				
1.26.0700	Commercial Art				
1.26.0800	Commercial Fishery & Oceanographic				
1.26.0900	Commercial Photography				
1.26.1001	Carpentry				
1.26.1002	Electricity				
1.26.1004	Masonry				
1.26.1007	Plumbing & Pipefitting				
1.26.1000	Other Constr. & Main. Trades				
1.26.1100	Custodial Services				
1.26.1200	Diesel Mechanic				
1.26.1300	Drafting and Design				
1.26.1400	Electrical				
1.26.1500	Electronics				

AA–1C
Rev. 8/1/79
Page 2 of 3

SUPPLEMENTAL
and
APPRENTICESHIP
COURSES ENROLLMENT
(ANNUAL)

ACADEMIC YEAR: ______________________ COLLEGE: ______________________

ICS CODE	COURSE CATEGORY	Enrollment in Supplemental Courses		Enrollment in Apprenticeship Courses	
		Female	Male	Female	Male
	TRADE & INDUSTRIAL Cont.				
1.26.1600	Fabric Maintenance Services				
1.26.1700	Foremanship Supvr. & Mgt. Devel.				
1.26.1900	Graphic Arts				
1.26.2000	Industrial Atomic Energy				
1.26.2100	Instrument Maint. & Repair				
1.26.2200	Maritime Occupations				
1.26.2300	Metal Working				
1.26.2400	Metallurgy				
1.26.2601	Barbering				
1.26.2602	Cosmetology				
1.26.2700	Plastics Occupations				
1.26.2900	Quantity Food				
1.26.3100	Small Engine Repair				
1.26.3200	Stationary Energy Sources				
1.26.3300	Textile Production and Fabrication				
1.26.3400	Leatherworking				
1.26.3500	Upholstering				
1.26.9900	Other Trade and Industrial				
	TOTAL TRADE & INDUSTRIAL				
	PUBLIC SERVICE				
1.27.0100	Fire Science				
1.27.0200	Law Enforcement				
1.27.0300	Education (Teacher Aide)				
1.27.0400	Library				
1.27.0500	Audio Visual (Multi Media)				
1.27.0600	Recreation				
1.27.0700	Social Service Work				
1.27.0800	Public Administration				
1.27.0900	Urban, Rural & Comm. Devel. Ser.				
1.27.1000	Resources Management Services				
1.27.9900	Other Public Service				
	TOTAL PUBLIC SERVICE				
TOTAL SUPPLEMENTAL AND APPRENTICESHIP					

Prepared By: ______________________

President's Signature ______________________ Date ____________

AA-1C
Rev. 8/1/79
Page 3 of 3

14.13

State of Florida
Department of Education
Tallahassee, Florida
Ralph D. Turlington, Commissioner
an equal opportunity employer

INSTRUCTIONS FOR SPECIAL SECTIONS REPORT
AA-1D

PURPOSE OF THE REPORT

The purpose of this report is to account for those students who are enrolled in the following types of programs:

(1) Special Vocational Programs
(2) Special Funded Vocational Programs
(3) Programs for Persons with Special Needs
(4) Programs of Special Legislative Purpose

INSTRUCTIONS AND DEFINITIONS

SECTION 1—ENROLLMENTS IN VOCATIONAL EDUCATION PROGRAMS

Column (b)
Enter total enrollments in the special program.

Column (c)
Enter number of female students enrolled. The number of male students will be the difference between the total and number of females.

Columns (d) and (e)
Enter enrollments for secondary and postsecondary levels. The sum of Columns (d) and (e) MUST equal Column (b).

NOTE: Columns (f) through (j) are not applicable.

A. Secondary High school youths in grades 7-12.

B. Postsecondary Persons who have completed or left high school and who are enrolled in an organized program of study in preparation for entering the labor market.

SECTION 2—ENROLLMENTS IN SPECIAL FUNDED VOCATIONAL EDUCATION PROGRAMS, BY LEVEL

Report the number of students who were served in programs which received special funds. This is a duplication of enrollments reported on another AA-1 report; hence, the parentheses.

Columns (b) through (h)
Report the number of students in each column as applicable.

SECTION 3—ENROLLMENTS OF PERSONS WITH SPECIAL NEEDS BY LEVEL

Lines 1 and 2
Break out the total number of students enrolled in all programs who are classified as disadvantaged or handicapped and received special services. This is duplication and does not equal the total.

A. Disadvantaged Persons who have academic, socioeconomic, cultural, or other handicaps (excluding physical or mental) that prevent them from succeeding in regular vocational education or consumer and homemaking programs designed for persons without such handicaps and who, for that reason, required specially designed educational programs or related services.

B. Handicapped Persons who are mentally retarded, hard of hearing, deaf, speech impaired, visually handicapped, seriously emotionally disturbed, crippled, or other health impaired persons who by reason of their handicap cannot succeed in a regular vocational or consumer and homemaking program designed for persons without such handicaps and who, for that reason, require special educational assistance or a modified vocational or consumer homemaking education program.

Columns (b) through (j)

Report the number of students in each column as applicable.

SECTION 4—SPECIAL NEEDS ENROLLMENTS BY TYPE OF INSTRUCTIONAL SETTING

Report here data on students identified in the last three columns of the AA-1A. Report each student only once, by the type of instructional setting of the vocational education program in which he or she is enrolled by handicapped, disadvantaged (110 and 140 refer to sections of the law that provides the funding) and limited English proficiency. The instructional setting of the program should be indicated as Mainstream/No Support, Mainstream/Support (from VEA funds) or Separate.

Definitions

Mainstream/No Support Program One that is conducted in an integrated setting, i.e., students having special needs together with students not having special needs. A student having special needs should be reported in a Mainstream/No Support program if that student experiences full participation in a mainstream vocational education program where no additional VEA funds are provided to assist the student.

Mainstream/Support Program One that is conducted in an integrated setting, i.e., students having special needs together with students not having special needs. A student having special needs should be reported in a Mainstream/Support program if that student experiences full participation in a mainstream vocational education program where ADDED SUPPORT SERVICES *ARE* PROVIDED BY VEA FUNDS TO ASSIST THE STUDENT.

Separate Program Refers to a program in which the person with special needs is enrolled at a regular school or separate institution in a vocational education program where the enrollment is limited to handicapped, disadvantaged or limited English proficiency persons. Also include vocational education program activities provided for these students in hospitals or at the student's home.

For Mainstream/Support and Separate Programs, report persons with special needs who meet the requirements under the law for the three special needs categories (handicapped, limited English proficiency and disadvantaged) who by reason thereof:

(1) Require and received special education assistance and related services, and

(2) Cannot succeed in the regular vocational education program without special educational assistance, or

(3) Require a modified vocational education program.

The term "special educational assistance" includes specially designed instruction, teachers' aides to support classroom or lab instruction, taped texts, interpreters or other effective methods of making orally delivered materials available to students, classroom equipment adapted for use by students with manual impairments, and other similar services and actions, as well as facility modifications.

The term "related services" includes transportation and such developmental, corrective and other support services as are required to assist a handicapped person to benefit from the vocational education program; such services include speech pathology and audiology, psychological services, physical and occupational therapy, recreation, counseling services, and medical services for diagnostic or evaluation purposes.

SECTION 5—ENROLLMENTS BY LEGISLATIVE PURPOSE

Report here data on enrollments on the AA-1A by legislative purpose. ONLY SPECIAL SERVICES BEING PROVIDED UNDER THE STATE PLAN are to be reported here. Report here the number of students benefitting from the specified Section 120, 130, and 150 expenditures for work-study, support services for women, day care services, and vocational education for displaced homemakers.

Definitions

Vocational Education Work-Study May be furnished to a student who has been accepted or is enrolled full-time and is in good standing in an approved vocational education program; is in need of the earnings to begin or continue his or her vocational program; is at least 15 years of age and less than 21 years of age at the onset of employment, and can maintain good standing in school while employed; is employed for no more than 20 hours in any school week; is paid no more than the prevailing rate for similar duties; and is employed by a public or nonprofit private agency or institution.

Support Services for Women Are for women who enter vocational education programs designed to prepare individuals for employment in jobs which have been traditionally limited to men, and include counseling, job development, and job follow-up support to overcome the barriers which women face in working in nontraditional areas.

Day-Care Services For the purpose of providing appropriate care and protection of infants, preschool and school-age children in order to afford students who are parents the opportunity to participate in vocational education programs. Such day-care services shall be governed by the Federal Interagency Day Care Requirements (45 CFR Part 71).

Vocational Education Programs for Displaced Homemakers and Other Special Groups Can be funded to assess and meet the needs of these special groups. The programs shall include organized educational programs to prepare these persons for employment, special courses preparing these individuals in how to seek employment, and the provision of placement services for the graduates of these programs.

Page 1 of 2

DIVISION OF COMMUNITY COLLEGES

SPECIAL SECTIONS REPORT

College: ______________________________

Academic Year: ____________________

Prepared by: ______________________________

SECTION 1 - ENROLLMENTS IN VOCATIONAL EDUCATION PROGRAMS

					ADULT				
PROGRAMS (a)	TOTAL (b)	FEMALE (c)	SECONDARY (d)	POST SECONDARY (e)	PREPARATORY (f)	SUPPLEMENTAL (g)	APPRENTICESHIP (h)	COOPERATIVE (i)	COMPLETIONS (j)
99.0302 Individual Manpower Train. Sys. (IMTS)					▨	▨	▨	▨	▨

SECTION 2 - ENROLLMENTS IN SPECIAL FUNDED VOCATIONAL EDUCATION PROGRAMS, BY LEVEL

14.18

Comprehensive Employ. Training Act (CETA)	( )	( )	( )	( )	( )	( )	( )	▨	▨
Migrant Education (Federal, State)	( )	( )	( )	( )	( )	( )	▨	▨	▨

SECTION 3 - ENROLLMENTS OF PERSON WITH SPECIAL NEEDS, BY LEVEL

Disadvantaged	( )	( )	( )	( )	( )	( )	( )	( )	( )
Handicapped	( )	( )	( )	( )	( )	( )	( )	( )	( )

AA-10

State of Florida
Department of Education
Tallahassee, Florida
Ralph D. Turlington, Commissioner
an equal opportunity employer

DIVISION OF COMMUNITY COLLEGES
SPECIAL SECTIONS REPORT

SECTION IV - Special Needs Enrollments by Type of Instructional Setting

Type of Setting	Handicapped	Disadvantaged 110	Disadvantaged 140	LEP
Mainstream/No Support		▨	▨	▨
Mainstream/Support				
Separate				
TOTAL		▨	▨	▨

SECTION V - Enrollments by Legislative Purpose

14.19

Participants by Legislative Purpose	TOTAL
Work Study (Include only programs provided for by vocational funding)	
Support Services for Women	
Day-Care Services	
Vocational Education for Displaced Homemakers	

AA-1D

Return to: Bureau of Research and Information Systems
Division of Community Colleges
Department of Education
Tallahassee, Florida 32301

DIVISION OF COMMUNITY COLLEGES

ANNUAL ENROLLMENT REPORT
FIRST-TIME-IN-COLLEGE
EARLY EXIT, G.E.D. STUDENTS

ACADEMIC YEAR: ______________________ **COLLEGE:** ______________________

INSTRUCTIONS

Enter the headcount of the total number of first time in college early exit G.E.D. students who are enrolled in programs leading to a degree, certificate or other formal award.

DEFINITIONS

First Time In College a student who has not attended any college prior to the current academic year.

Early Exit G.E.D. a student who completed high school *early* by taking and passing the General Educational Development (GED) Tests. Students who legally have dropped out of high school or who are entering from an adult high school program *are not to be included.*

Programs Leading to a Degree, Certificate or Other Formal Award a student who is enrolled *only* in a program leading to a degree, certificate or other formal award. Do not include students enrolled in Community Instructional Services or Recreational and Leisure Time programs.

Total enrollment headcount of first time in college early exit GED students	☐

Prepared By ______________________

President's Signature ______________________ Date ______________________

Return to: Bureau of Research and Information Systems
Division of Community Colleges
Tallahassee, Florida 32301

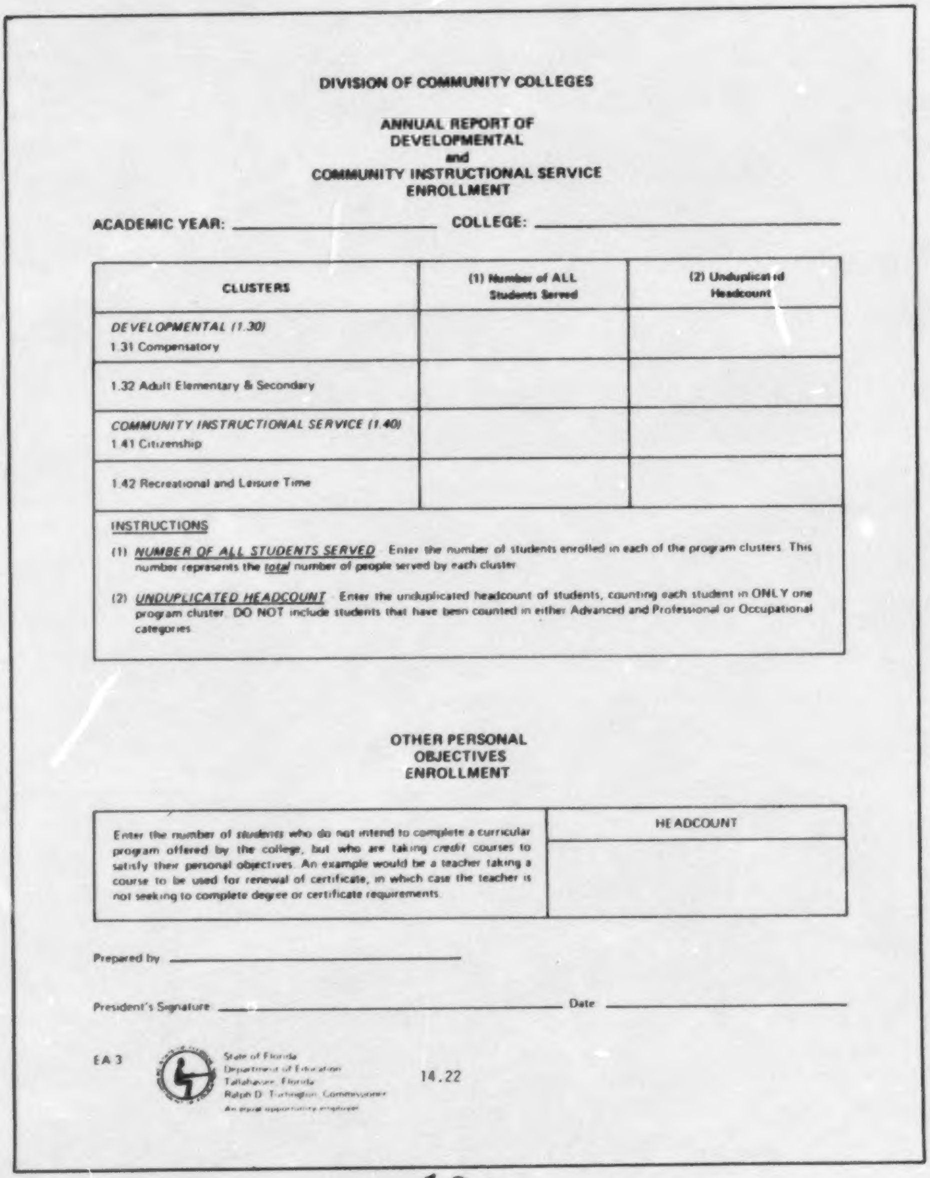
State of Florida
Department of Education
Tallahassee, Florida
Ralph D. Turlington, Commissioner
An equal opportunity employer

AA-1E

INSTRUCTIONS FOR ANNUAL REPORT OF DEVELOPMENTAL AND COMMUNITY INSTRUCTIONAL SERVICE ENROLLMENT (EA-3)

PURPOSE OF THE REPORT

The EA-3 report provides the annual enrollment headcount of two different groups of students. The first group represents those students enrolled in a Developmental and Community Instructional Services program. The second group represents those students who have no intent of completing a curricular program offered by the college, but are taking credit courses to satisfy their personal objectives. Further instructions are provided on the EA-3 report form.



DIVISION OF COMMUNITY COLLEGES

ANNUAL REPORT OF
DEVELOPMENTAL
and
COMMUNITY INSTRUCTIONAL SERVICE
ENROLLMENT

ACADEMIC YEAR: ____________ **COLLEGE:** ____________

CLUSTERS	(1) Number of ALL Students Served	(2) Unduplicated Headcount
DEVELOPMENTAL (1.30) 1.31 Compensatory		
1.32 Adult Elementary & Secondary		
COMMUNITY INSTRUCTIONAL SERVICE (1.40) 1.41 Citizenship		
1.42 Recreational and Leisure Time		

INSTRUCTIONS

(1) *NUMBER OF ALL STUDENTS SERVED* - Enter the number of students enrolled in each of the program clusters. This number represents the *total* number of people served by each cluster.

(2) *UNDUPLICATED HEADCOUNT* - Enter the unduplicated headcount of students, counting each student in ONLY one program cluster. DO NOT include students that have been counted in either Advanced and Professional or Occupational categories.

OTHER PERSONAL
OBJECTIVES
ENROLLMENT

Enter the number of students who do not intend to complete a curricular program offered by the college, but who are taking *credit* courses to satisfy their personal objectives. An example would be a teacher taking a course to be used for renewal of certificate, in which case the teacher is not seeking to complete degree or certificate requirements.	HEADCOUNT

Prepared by ____________

President's Signature ____________ Date ____________

EA 3

State of Florida
Department of Education
Tallahassee, Florida
Ralph D. Turlington, Commissioner
An equal opportunity employer

14.22

PLACEMENT AND FOLLOW-UP PROGRAM REPORTS
(AA-2, AA-3, AA-4, AA-5)

[This section contains reports and instructions dealing with the placement and follow-up of completers and leavers. The AA-2/AA-5 Series provides information about PLACEMENT AND FOLLOW-UP PROGRAM REPORTS. Each report in this series is listed and identified below:

Report Identification	Report Name
AA-2	Placement and Follow-up
AA-3A	Follow-up and Withdrawal Studies
AA-3B	Program Evaluation
AA-4	Employer Rating Summary
AA-5	Field of Employment and Average Hourly Salary]

PURPOSE OF THE REPORTS

The purpose of these reports is to provide placement and follow-up information on each program offered by the college. Therefore, separate report forms should be prepared for each program. The information collected is used by the Division of Community Colleges to prepare reports for the Division of Vocational Education and the Legislature, to provide employment supply data for the manpower studies conducted by the Department of Commerce and other State agencies, to prepare Federal reports for each college, and to monitor the State plan for equal access and equal opportunity.

GENERAL DEFINITIONS

The AA-2 report deals with the PLACEMENT of student completers and leavers. This is a report of the placement of these students who terminated the program in the prior academic year either by completing the program or by leaving the program. The AA-2 involves the same cohort of students that were reported on the AA-1A Program Enrollments and Terminations report on Line 2 (completers). Thus, Line 1G on the AA-2 must contain the same number of students as are reported on Line 2 of the AA-1A report when reporting completers. Reporting is on an annual basis for each program (see instructions on Sampling).

> NOTE: The requirement for follow-up on program leavers applies only to occupational programs.

The AA-3 report deals with the FOLLOW-UP of students who completed degree and certificate programs and those who *left* the program prior to normal completion. The purpose of FOLLOW-UP is to collect information from the students and employers which can be used to evaluate the success of a program in achieving its objectives and provide a basis for making appropriate changes and updates to the program. The information identifies the number of students included in the follow-up studies. The findings, conclusions, and uses of the studies are summarized in the AA-3 report. This information (AA-3) is reported *only* for years in which follow-up and/or withdrawal studies are conducted.

STUDENTS TO BE INCLUDED IN THE FOLLOW-UP STUDIES

This includes either all of the students who completed the program or a reasonable sample thereof. It is very important to note that the follow-up studies *do not* relate to any particular academic year or time frame, but may include students from several different years. The numbers reported in this part of the study simply show the number of students included in the studies. The conclusions and findings are included in the AA-3B report.

STUDENTS TO BE INCLUDED IN THE WITHDRAWAL STUDIES

This includes either all of the students who withdrew from a program or a reasonable sample thereof. The withdrawal studies *do not* relate to any particular academic year but may include withdrawals from a number of different years. The numbers reported reflect the students studied and the results of the study. For the purpose of this report a withdrawal is defined in the same manner as a leaver is defined for the AA-2.

SAMPLING

It is possible to sample the student placement survey if the number of completions in any *one* column is sufficiently large to allow the drawing of a random sample. One should use a sample size large enough to support a confidence level of .95 and a precision of .05 (see the Table of Minimum Sample Sizes for proper sample size). Even though sampling is used, one should report according to the estimated population rather than the absolute sampling results.

REPORTING BY CAMPUS

Colleges with more than one campus may report by campus or on a college-wide basis. However, it is necessary that the AA-1A and the AA-2 reports be done on the same basis so that enrollments, completions, and placements from the two reports can be matched.

DUE DATE OF REPORTS

The AA-2 and AA-3A reports are due in the office of the Division of Community Colleges according to the schedule indicated on the chart of reports in Section 1 [of the *CCMIS Procedures Manual*].

INSTRUCTIONS FOR COMPLETING THE AA-2 PLACEMENT AND NONRETURNING STUDENTS REPORT

Separate forms should be submitted for completers and leavers. Check the appropriate line in the top part of the form to identify which type of student the report represents. The following definitions are those data categories on the left hand margin of the report:

PLACEMENT

This section of the report includes placement data for *all* students who completed the program during the prior academic year and were reported in Item 2 of the AA-1A report or who left the program prior to completion. We are, therefore, following up on the placement of a particular cohort of students. The following are the specific data categories:

A. Employed Full-Time in Field Trained or Related Field

This means that the student who completed the program is employed *full-time* in the field for which he/she was trained or a closely related field.

A1. **Total** Total number of students for each column.

A2. **Military Only** The number of students in full-time military service for each column.

B. Other Employment (not related field)

This includes students who are employed full-time but not in the field for which they were trained by the program. It includes those persons who completed the General Degree Transfer (A.A.) program, are employed full-time, and are *not* continuing their education.

B1. **Total** Total number of students for each column.

B2. **Military Only** The number of students in full-time military service for each column.

C. Continuing Their Education

This includes those students continuing their education.

D. Unemployed and Seeking Employment (work)

These are persons seeking employment but currently unemployed who are not continuing their education.

E. Not in Labor Force

These are persons who are not seeking employment and not continuing their education for such reasons as death, illness, or *choice*.

F. Placement Status Unknown

These are the students who cannot be located to determine their placement status.

G. Total (same as Item 2 when reporting completers)

This is the total of those students who completed the program and were reported on Item 2 on the Program Enrollments and Terminations Report or who left the program prior to completion. It is also the total of Items A through F of this report for each column. *These cross-checks should be made prior to submitting the report.*

SPECIAL NEEDS SECTION

The last three columns refer to the placement status of those persons identified on the AA-1A as handicapped, limited English proficiency or disadvantaged. The totals on Line 1G should match the totals on Line 2 of the AA-1A for these columns when reporting on completers.

Leavers

For the purpose of the AA-2 and AA-4 reports the term leavers is defined as former students ". . .who did not complete the program and did not return to enroll in the institution for two consecutive semesters. . .or who notified the institution of intent not to enroll again in that institution prior to program completion" (NCES 2404-5 and 2404A-7, Page 3). Operationally, leavers are obtained as follows:

> Remove completers from the universe of all enrollments on the AA-1A. This gives potential leavers. From this group of potential leavers, remove any who are enrolled in the current year's fall or winter semester. Those remaining are the true leavers and constitute the leaver follow-up universe. They include those who transferred to another school or between an A & P and vocational program. Thus the leaver universe cannot be identified until after winter registration of the year following the year in which they were counted as enrollments.

Program Code: ____________________

Program Title: ____________________

Campus: ____________________

Year Covered: ____________________

PLACEMENT AND FOLLOW-UP REPORT

Placement and Follow-Up

State of Florida
Department of Education
Tallahassee, Florida
Ralph D. Turlington, Commissioner
Affirmative action/equal opportunity employer

College: ____________________

Prepared by: ____________________

Date Prepared: ____________________

Occupational Program Type: ____ Post-Secondary Technical ____ Post-Secondary Skilled/ Semi-skilled	Program Length: ____ Semester Credit Hours ____ Clock Hours	Completion Award Type: ____ Associate in Arts ____ Associate in Science ____ Technical Certificate ____ Associate in Applied Science ____ Certificate of Applied Science ____ Certificate of Training	____ Completers ____ Leavers

Data Categories	Non-Resident Alien		Asian or Pacific Islander		American Indian or Alaskan Native		Black (Not of Hispanic Origin)		Hispanic		White (Not of Hispanic Origin)		TOTALS	SPECIAL NEEDS		
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male		Handi-capped	Limited English Proficiency	Disad-vantaged
I. PLACEMENT A. Employed in related field A1. Total																
A2. Military Only																
B. Other employment (Not in related field and not pursuing educa.) B1. Total																
B2. Military Only																
C. Continuing Education																
D. Unemployed-Seeking employment (work) and not pursing education																
E. Not in Labor Force and not pursuing additional education																
F. Placement status unknown																
G. Total																

16.4

AA-2

TABLE OF MINIMUM SAMPLE SIZES

Confidence = 0.950 Precision = 0.050 No. of Items = 1

POP.	N	POP.	N	POP.	N	POP.	N
1	1	36	33	210	136	800	260
2	2	37	34	220	140	850	265
3	3	38	35	230	144	900	270
4	4	39	36	240	148	950	274
5	5	40	37	250	152	1000	278
6	6	41	38	260	156	1100	285
7	7	42	38	270	159	1200	292
8	8	43	39	280	162	1300	297
9	9	44	40	290	166	1400	302
10	10	45	41	300	169	1500	306
11	11	46	42	310	172	1600	310
12	12	47	42	320	175	1700	314
13	13	48	43	330	178	1800	317
14	14	49	44	340	181	1900	320
15	15	50	45	350	184	2000	323
16	16	55	49	360	186	2500	334
17	17	60	52	370	189	3000	341
18	18	65	56	380	192	3500	347
19	19	70	60	390	194	4000	351
20	20	75	63	400	197	4500	355
21	21	80	67	410	199	5000	357
22	21	85	70	420	201	6000	362
23	22	90	73	430	203	7000	365
24	23	95	77	440	206	8000	367
25	24	100	80	450	208	9000	369
26	25	110	86	460	210	10000	371
27	26	120	92	470	212	20000	378
28	27	130	98	480	214	30000	380
29	27	140	103	490	216	40000	381
30	28	150	108	500	218	50000	382
31	29	160	113	550	227	100000	383
32	30	170	118	600	235	150000	384
33	31	180	123	650	242	200000	384
34	32	190	128	700	249	250000	384
35	33	200	132	750	255	300000	384

FOR INFINITE POPULATION, N = 385

INSTRUCTIONS FOR COMPLETING THE AA-3A FOLLOW-UP AND WITHDRAWAL STUDIES

The following definitions are those data categories on the left-hand margin of the report:

1. FOLLOW-UP STUDIES

A. Number of Students

If a follow-up study was conducted for this program during the academic year, report the number of students who were followed-up. It is important to note that this part of the report is completed only when a follow-up study is conducted during the academic year being reported.

2. WITHDRAWAL STUDIES

A. Number of Students Contacted Through Interviews or Responding to a Questionnaire

Report the total number of students who responded or were contacted if a *withdrawal* study was conducted for this program during the academic year being reported. The sums of Items B, C, and D below should be equal to or less than A. It is important to note that this part of the report is not completed unless a withdrawal study was conducted and completed during the time frame covered by this report.

B. Students Planning to Return

This is the number of students who have temporarily "stopped-out" of college but plan to return at a later date to continue their education (any college).

C. Students Who Feel They Have Achieved Their Educational Goal Prior to Completing the Program

This is the number of students who feel they have achieved their educational goal and have entered the labor market.

D. Students Not Attaining Their Educational Goal and Not Planning to Continue Their Education

These are students who dropped out of the college without achieving their educational goal.

INSTRUCTIONS FOR COMPLETING THE AA-3B PROGRAM EVALUATION REPORT

The Program Evaluation Report should be filled out by the program manager. (This is the person under whose immediate direction the program is being conducted.)

Part I consists of two sections, A and B. Section A is to be filled out by program managers both in the vocational area and in the transfer program. Section A asks program managers to assess the degree to which program entry communication and computation competencies have been defined and measured at the point a student enters a program and at the point a student enters employment or transfers to an institution of higher education. Zero (0) indicates no definition or measurement. Two (2) indicates complete definition and measurement of communication and computation competencies. Section B (for vocational program managers only) asks for an assessment of the definition and measurement of the manipulative skills associated with a vocational program at the point the student exits the program and enters the occupation for which the student was trained.

PLACEMENT AND FOLLOW-UP REPORT

Follow-Up and Withdrawal Studies

Program Code: ____________
Program Title: ____________
Campus: ____________
Year Covered: ____________

State of Florida
Department of Education
Tallahassee, Florida
Ralph D. Turlington, Commissioner
Affirmative action equal opportunity employer

College: ____________
Prepared by: ____________
Date Prepared: ____________

Occupational Program Type:	Program Length:	Completion Award Type:
____ Post-Secondary Technical ____ Post-Secondary Skilled/ Semi-skilled	____ Semester Credit Hours ____ Clock Hours	____ Associate in Arts ____ Associate in Science ____ Technical Certificate ____ Associate in Applied Science ____ Certificate of Applied Science ____ Certificate of Training

Data Categories	Non-Resident Alien		Asian of Pacific Islander		American Indian or Alaskan Native		Black (not of Hispanic Origin)		Hispanic		White (not of Hispanic Origin)		TOTALS		
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Total
3. FOLLOW-UP STUDIES A. Number of students (unduplicated count)															
4. WITHDRAWAL STUDIES A. Number of students contacted through interviews or responding to a questionnaire. (Unduplicated count)															
B. Students planning to return															
C. Students who feel that they have achieved their educational goal prior to completing the program															
D. Students NOT achieving their educational goal and not planning to continued their education															

16.8

AA-3A

Part II of the AA-3B report is also to be filled out by the program managers. Part II is an assessment of the process by which programs are changed or modified based upon various sources of information.

DIVISION OF COMMUNITY COLLEGES

Placement and Follow-Up
Program Evaluation Report
(THIS REPORT IS TO BE COMPLETED BY THE PROGRAM MANAGER)

College ______________________________

Name of Program Evaluated ______________________________ Program Manager ______________________________

PART I Communication and Computation Status Rating. To be reported for both Vocational Programs and Transfer Programs. (0 = competencies not defined or measured, and 2 = competencies defined and measured.) CHECK THE APPROPRIATE BOX

A. PROGRAM ENTRY COMMUNICATION AND COMPUTATION COMPETENCIES DEFINED AND MEASURED

	0	1	2
Communication	☐	☐	☐
Computation	☐	☐	☐

EMPLOYMENT ENTRY OR ENTRY INTO HIGHER EDUCATION COMPETENCIES DEFINED AND MEASURED

	0	1	2
Communication	☐	☐	☐
Computation	☐	☐	☐

B. Skill Competency Rating - for Vocational Programs only. (Skills are defined as those manipulative abilities associated with a particular vocational training program.)

EMPLOYMENT SKILL COMPETENCIES DEFINED AND MEASURED

0	1	2
☐	☐	☐

PART II Program managers should be able to answer the following questions after reviewing the AA Series, as well as the information contained in the community college/state university system G.P.A. Matrix report and the SUS/Department of Commerce Feedback report - plus any other sources of information.

1. Which of the following reports have you reviewed?

   The AA Series - 1, 2, 3, 4, 5 ______ GPA Matrix ______ SUS/Dept. of Commerce Feedback ______

2. What other sources of information do you use in evaluating the performance of students?

3. What findings or conclusions have resulted from the placement and follow-up evaluation of students who completed the program?

4. In light of the findings or conclusions, what changes are being considered and/or have been made in the expected outcomes of the program?

5. In light of the findings or conclusions, what changes are being considered and/or have been made in the design and implementation of the instructional support components of the program?

6. Are there requirements of law or regulations external to the college which inhibit needed program modifications? (If so, please explain.)

7. What findings or conclusions result from the study of students who withdraw from the program prior to completion of the program?

8. The average monthly starting salary range (gross) for the completors from the program. (Please review the SUS/Department of Commerce Feedback report for this information.)

9. Please provide an opinion of employer satisfaction with the performance of the completors from this program as compared to the performance of persons who did not receive training in a vocational program.

DESCRIPTION OF THE COMPLETER/LEAVER FOLLOW-UP FORM (CLFU) ITEMS REQUIRED

The CLFU form is fundamentally self-explanatory. Additional notes are provided below.

1. Educational Status

The Completer/Leaver Follow-up Report differentiates between attending school and not attending school.

2. Employment Status

Self-explanatory.

3. Employer, Supervisor, Job Title, and Job Duties

The employer supervisor information is not needed for the Completer/Leaver Follow-up Report, but is necessary to determine the recipient of the Employer Follow-up Form (NCES 2404-6).

4. Job Relatedness to Training

A Minnesota study indicated that the individual's identification of relatedness seems to be as valid as any existing procedure for determining relatedness. However, State officials may wish to consider the individual's statements of job title and job duties as an additional indication of relatedness.

5. Current Salary

Since many individuals know their salary by measures other than hourly (e.g., monthly, annually), NCES recommends that States use the format provided. This information can be converted to hourly salary by using the data in Items 5 and 6 and applying the relationship

1 year = 12 months = 52 weeks.

6. Hours Employed per Week

Self-explanatory.

Upon receipt of the CLFU from the former student, the information should be linked to that individual. *If the former student does not return the CLFU, this should be reflected in the linkage by defining the individual's education and employment status as "Unknown."* The remaining items would then be left blank.

Each community college may design its own form, which must include data elements on the CLFU verbatim. No changes in language on the CLFU are permitted.

COMPLETER/LEAVER FOLLOW-UP FORM

NOTE: This report is authorized by law (20 USC 2312 and 20 USC 2391). While you are not required to respond to this survey, your cooperation is needed to insure that the results of this effort are comprehensive, reliable, and timely.

1. What is your current educational status? (Check one.)
   - ____ Currently attending school
   - ____ Not currently attending school

2. What is your current employment status? (Check one.)
   - Employed (Includes all employment, even if below your qualifications; does not include full-time military service.)
   - Employed (Full-time military service.)
   - Unemployed (Not employed, but actively seeking employment.)
   - Not in the labor force (Not employed and not seeking employment because of choice, illness, full-time student status, retirement, pregnancy, or other such reason.)

NOTE: If you are currently employed, please answer the remaining questions. Otherwise, skip the remaining items.

3. Please provide the following information on your present job:

   Name of Company or Firm (If self-employed, please write self.)

   ____

   Company or Firm Mailing Address

   ____

   City ____________________ State __________ Zip Code __________

   Your Immediate Supervisor

   Last Name ____________________ First Name ____________________ M. I. __________

   PRESENT JOB INFORMATION:

   Job Title

   Job Duties

4. Is this job related to your field of vocational training?
   - Yes, it is directly or closely related.
   - No, it is only remotely related or is not related at all.

5. What is your current salary before deductions? (Do not add in overtime.)

   $ __________ per __________

6. The salary in the preceding item is based on how many hours per week employment?

   __________ hours per week

Thank you very much for your cooperation. Please return this form in the enclosed envelope.

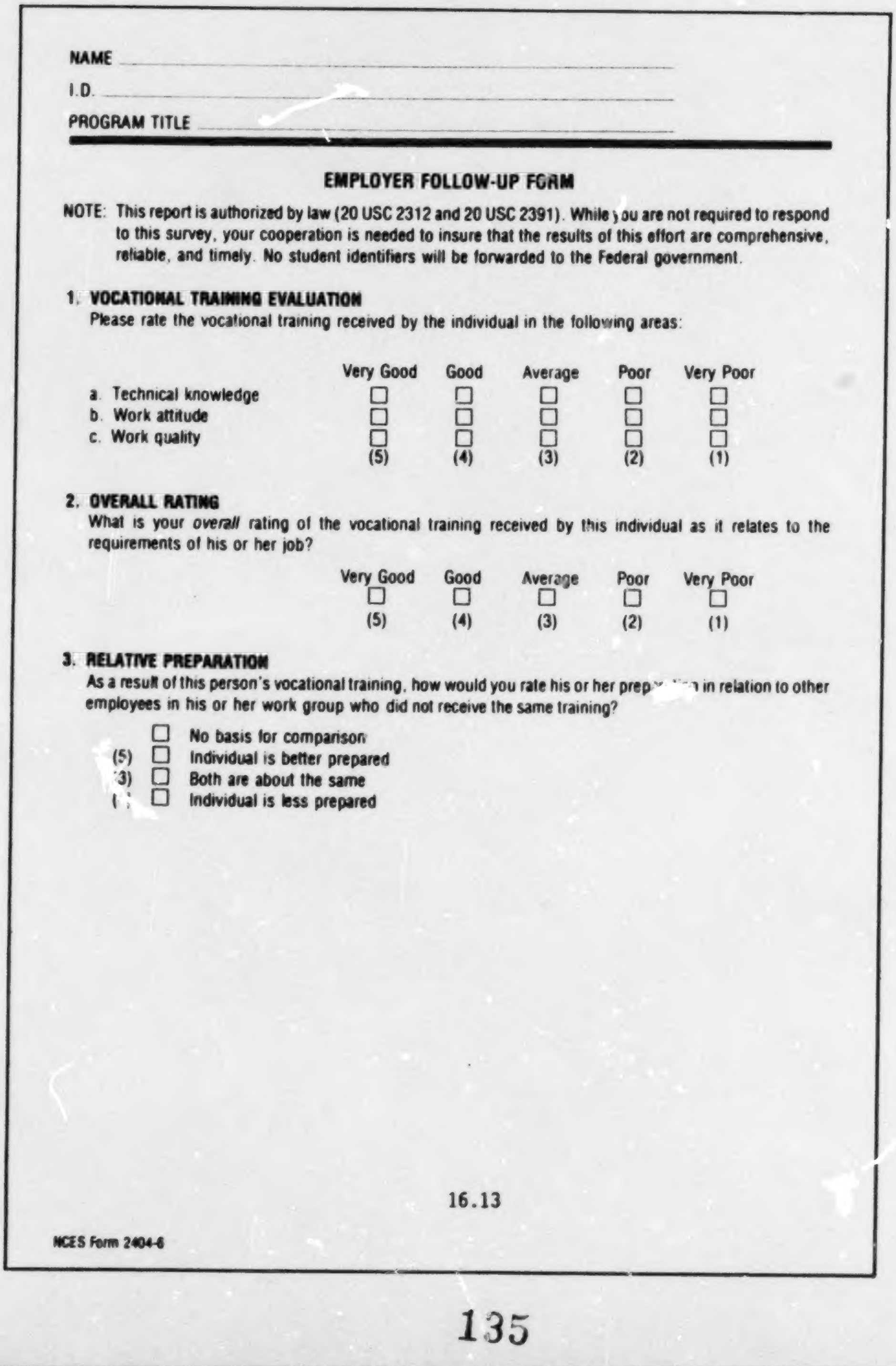
NCES Form 2404-5

16.11

DESCRIPTION OF THE EMPLOYER FOLLOW-UP FORM (EFU) ITEMS REQUIRED

The form should be self-explanatory. Employer Follow-up Forms are sent only to employers of those students (completers and leavers) who indicated that they WERE EMPLOYED IN A FIELD RELATED TO THEIR TRAINING, civilian only. A self-employed person does not receive a follow-up form.

Each community college may design its own form, which must include data elements on the EFU verbatim. No changes in the language on the EFU are permitted.



NAME ____________________

I.D. ____________________

PROGRAM TITLE ____________________

EMPLOYER FOLLOW-UP FORM

NOTE: This report is authorized by law (20 USC 2312 and 20 USC 2391). While you are not required to respond to this survey, your cooperation is needed to insure that the results of this effort are comprehensive, reliable, and timely. No student identifiers will be forwarded to the Federal government.

1. VOCATIONAL TRAINING EVALUATION

Please rate the vocational training received by the individual in the following areas:

	Very Good	Good	Average	Poor	Very Poor
a. Technical knowledge	☐	☐	☐	☐	☐
b. Work attitude	☐	☐	☐	☐	☐
c. Work quality	☐	☐	☐	☐	☐
	(5)	(4)	(3)	(2)	(1)

2. OVERALL RATING

What is your *overall* rating of the vocational training received by this individual as it relates to the requirements of his or her job?

Very Good	Good	Average	Poor	Very Poor
☐	☐	☐	☐	☐
(5)	(4)	(3)	(2)	(1)

3. RELATIVE PREPARATION

As a result of this person's vocational training, how would you rate his or her preparation in relation to other employees in his or her work group who did not receive the same training?

☐ No basis for comparison
(5) ☐ Individual is better prepared
(3) ☐ Both are about the same
(1) ☐ Individual is less prepared

16.13

NCES Form 2404-6

INSTRUCTIONS FOR AA-4 EMPLOYER RATING SUMMARY REPORT

Separate forms should be submitted for completers and leavers. Check the appropriate line in the top part of the form to identify which type of student the report represents.

NUMBER OF RESPONDENTS

In the first row of the AA-4 the number of EFU Forms that were completed and returned (which relate to the column in which the entry is being made) should be entered. Thus, if 37 forms were completed and returned for Male Hispanics, the entry in the first row and the tenth column of Part 1 would be 37.

EMPLOYER RATINGS

In the remaining rows, the total score from the employer ratings for each item of the EFU forms should be entered. These scores should be calculated by assigning "points" to each response as indicated below:

Items 1a, 1b, 1c, and 2 (EFU)	Item 3 (EFU)
5 - Very good	* - No basis for comparison
4 - Good	5 - Individual is better prepared
3 - Neutral	3 - Both are about the same
2 - Poor	1 - Individual is less prepared
1 - Very poor	

***Do not include these marks in figuring.**

After "scoring" each item for each individual in this way, add the scores. Also record the number of scores there were for each category. *Note that with Item 3 (Relative Preparation), you should not include those forms in which the "No basis for comparison" box was checked in determining the rating.*

The total scores, once calculated, and the number of scores should be entered in the appropriate rows and columns of the various parts of AA-4.

The Totals column should equal the sum of the first twelve columns. The sum of the Special Needs columns may not equal the Totals column.

COLUMN HEADINGS

The column headings refer to the same racial and special needs breakdown as defined for the AA-1A and the AA-2.

Program Code: ____________________

Program Title: ____________________

Campus: ____________________

Year Covered: ____________________

Correction: ____________________

DIVISION OF COMMUNITY COLLEGES
EMPLOYER FOLLOW-UP REPORT
EMPLOYER RATING SUMMARY

College: ____________________

Prepared by: ____________________

Date Prepared: ____________________

Completers: ____________________

Leavers: ____________________

Occupational Program Type:

___Post-Secondary Technical
___Post-Secondary Skilled/Semi-skilled

Program Length:

___Semester Credit Hours
___Clock Hours

Complete Award Type:

___Associate in Arts
___Associate in Science
___Technical Certificate
___Associate of Applied Science
___Certificate of Applied Science
___Certificate of Training

16.15

EMPLOYER RATINGS		Non-Resident Alien		Asian or Pacific Islander		American Indian or Alaskan Native		Black (Not of Hispanic Origin)		Hispanic		White (Not of Hispanic Origin)		TOTALS	SPECIAL NEEDS		
		Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male		Handicapped	Limited English Proficiency	Disadvantaged
Number of Respondents	Total # of forms																
Technical	# of scores																
Knowledge	Total score																
Work	# of scores																
Attitude	Total score																
Work	# of scores																
Qaulity	Total score																
Overall	# of scores																
Rating	Total score																
Relative	# of scores																
Preparation	Total score																

AA-4

INSTRUCTION FOR AA-5 FIELD OF EMPLOYMENT AND AVERAGE HOURLY SALARY

On the AA-5, Section I, indicate the number of occupational preparatory completers only who were employed in the field for which they were trained or were employed in a nonrelated field and are not pursuing additional education.

The distribution of the count for each instructional program by Standard Occupational Classification (SOC) category (field of employment) can be determined from the respondent's Completer/Leaver Follow-up Form. Item 3 on the Completer/Leaver Follow-up Form will provide job title and job duties information that can be translated into the appropriate SOC category. Definitions for each two-digit SOC category are provided.

"Average Hourly Salary" for the AA-5, Section II, should be calculated *only for those individuals who are employed full-time in fields for which they were trained, civilian only*. Full-time shall be interpreted as at least 35 hours per week. The average of these hourly salaries should then be entered in the appropriate male/female "Average Hourly Salary" space in Section II. As an example, if the salaries per hour for all males were:

$$\begin{array}{r} \$4.60 \\ 3.85 \\ \underline{2.77} \\ \$11.22 \div 3 = \$3.74 \text{ (average)} \end{array}$$

The average, $3.74, would be entered as the average salary for males.

Number refers to the number of persons from which the average is computed. In this example, Number equals 3. The information on average weekly wage contained in the Feedback System reports may be used for this form. Convert from *full-time weekly wage* to hourly wage by dividing by 40. For the purposes of this report, if Feedback System data are used, base the report upon only those persons working the full 13 weeks.

NOTE: Occupational Home Economics only reported on AA-5.

DIVISION OF COMMUNITY COLLEGES

PLACEMENT AND FOLLOW-UP REPORT

Field of Employment and Average Hourly Salary

(COMPLETERS ONLY)

Program Code: ____________________

Program Title: ____________________

Campus: ____________________

Year Covered: ____________________

College: ____________________

Prepared by: ____________________

Date Prepared: ____________________

Occupational Program Type: ___Post-Secondary Technical ___Post-Secondary Skilled/Semi-skilled	Program Length: ___Semester Credit Hours ___Clock Hours	Completion Award Type: ___Associate in Arts ___Associate in Science ___Technical Certificate ___Associate in Applied Science ___Certificate of Applied Science ___Certificate of Training

SECTION 1. OCCUPATIONAL FIELD OF CURRENT EMPLOYMENT

Standard Occupational Classification (SOC)

14	____	37	____	46-47	____	57	____	77	____
17	____	38	____	48	____	58	____	99	____
29	____	39	____	51	____	61	____		
30	____	41	____	52	____	64	____		
32	____	42	____	53	____	67	____		
36	____	45	____	55	____	72	____		

SECTION II. AVERAGE HOURLY SALARY*

	Male	Female
Number of persons	________	________
Average Salary	\$__ __.__ __	\$__ __.__ __

* In Section II include salaries for full-time employment in a field related to training.

State of Florida
Department of Education
Tallahassee, Florida
Ralph D. Turlington, Commissioner
Affirmative action/equal
opportunity employer

AA-5

TWO-DIGIT STANDARD OCCUPATIONAL CLASSIFICATION (SOC) CODES FOR AA-5 PLACEMENT AND FOLLOW-UP REPORT—FIELD OF EMPLOYMENT AND AVERAGE HOURLY SALARY

This attachment contains brief descriptions of the 26 two-digit SOC codes used in Part D of the Completer/Leaver Follow-up Report (NCES 2404-7). These descriptions are taken from the *Standard Occupational Classification Manual.** These are presented for informational use only. In order to assign the appropriate two-digit code to the returned Student Follow-up Form, the *Standard Occupational Classification Manual* must be consulted. It contains detailed descriptions and lists of occupations.

14 MANAGEMENT RELATED OCCUPATIONS

This major group includes occupations primarily concerned with planning, organizing, directing, and controlling, through subordinate supervisory personnel, specialized functions in support of management, such as examining, analyzing, and interpreting financial records and policies; reviewing and analyzing organizational structures, methods, systems, and administrative practices; conducting programs of employee placement, recruitment, selection, training, promotion, welfare, safety, compensation, and recreation; purchasing goods for internal organizational use; buying, selling, leasing, or managing property; and enforcing or advising on standards of performance and adherence to regulations.

For example: accountant, auditor, recruiter, fiscal agent, employment-and-claims aide, grain buyer, administrative secretary.

17 COMPUTER, MATHEMATICAL, AND OPERATIONS RESEARCH OCCUPATIONS

This major group includes occupations concerned with the application of mathematical knowledge to the conduct of research and development and related activities. Data processing programmers are classified in minor group 393.

For example: computer systems analyst, operations researcher and analyst, actuary, statistician.

29 REGISTERED NURSES

This major group includes occupations involving the planning, delivery, and evaluation of nursing care and a wide variety of nursing services including health maintenance and prevention of illness, and treatment of illness under a physician's instructions. Licensed Practical Nurses (LPN) are classified in minor group 366.

For example: school nurse, office nurse, general duty nurse.

32 WRITERS, ARTISTS, PERFORMERS, AND RELATED OCCUPATIONS

This major group includes occupations concerned with creating and executing artistic works in a personally interpreted manner, by painting, sculpturing, drawing, engraving, etching, and other methods; creating designs for industrial and commercial products and interior decorations; designing cartoons and illustrations for books, magazines, and other publications; applying artistic media for illustrative, decorative, and sales promotion purposes; obtaining pictures and likenesses with still, motion picture, and television cameras. It includes occupations concerned with producing, directing, staging, and acting in motion picture, broadcast, and theatrical productions; composing, adapting, conducting, and performing musical works and dances; performing a variety of amusing, mystifying, and spectacular acts for entertainment of audiences.

**Standard Occupational Classification Manual*, 1977, Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, Stock No. 041-001-00153-1.

For example: author, clothes designer, illustrator, graphic designer, cartoonist, decorator, musician, composer, actor, photographer, stage manager.

36 HEALTH TECHNOLOGISTS AND TECHNICIANS

This major group includes occupations concerned with carrying out technological and technical functions in a medical specialization to obtain data for use in diagnosis, treatment, and control of diseases, using knowledge of scientific and mathematical principles and medical laboratory practices. Dental laboratory technologists and technicians are classified in unit group 7265.

For example: clinical laboratory technician, dental hygienist, radiologic technician, licensed practical nurse, pharmacy assistant, emergency medical technician.

37 ENGINEERING AND RELATED TECHNOLOGISTS AND TECHNICIANS

This group includes occupations concerned with assisting engineers in both laboratory and production activities. Performs technical tasks under the general supervision of an engineer, utilizing basic knowledge of specific engineering, scientific, mathematical, and drafting design principles and techniques. May perform procedures and related activities independently.

For example: electrical technician, electronics technician, industrial engineering technician, mechanical-engineering technician, heat transfer technician, welding technician, sound mixer, recording engineer, and drafting and surveying technicians.

38 SCIENCE TECHNOLOGISTS AND TECHNICIANS

This major group includes occupations concerned with assisting scientists in both laboratory and production activities. Performs technical tasks under the general supervision of a scientist, utilizing basic knowledge of specific scientific and mathematical principles and techniques. May perform technical procedures and related activities independently.

For example: biological technologist and technician, except health; chemical and nuclear technologist and technician; mathematical technician.

39 TECHNICIANS: EXCEPT HEALTH, ENGINEERING, AND SCIENCE

This major group includes occupations concerned with performing technical tasks, except in the fields of health, engineering, and science.

For example: air traffic controller, radio operator, programmer, legal technician, teacher aide, embalmer, sound-effects technician.

41 SALES OCCUPATIONS, COMMODITIES

This major group includes occupations concerned with conducting wholesale and retail businesses which sell commodities on own or owners' behalf or in partnership; supervising and coordinating activities of workers directly and indirectly engaged in selling commodities; selling machinery and equipment and providing technical information about their composition, utilization, and maintenance; selling products of manufacturers to wholesale and retail establishments; selling commodities on a wholesale basis usually in a specific geographic area; and selling and demonstrating commodities in wholesale and retail establishments and homes, on the street, and from door to door. Sales managers are classified in minor group 125.

For example: technical sales worker and service advisor, sales representative, commodities salesperson, other sales occupations (sales clerk, street vendor, news vendor).

42 INSURANCE, SECURITIES, REAL ESTATE, AND SERVICE SALES OCCUPATIONS

This major group includes occupations concerned with selling various types of insurance; selling and leasing real estate; buying and selling securities; and selling advertising and business services.

For example: insurance sales agent, real estate sales agent, securities sales agent, advertising salesperson, travel agent, equipment rental clerk.

45 SUPERVISORS, CLERICAL OCCUPATIONS*

This major group includes occupations concerned with supervising the preparing, transcribing, transferring, systematizing, and preserving of written communications of records; collecting accounts; gathering and distributing information; operating office machines and electronic data-processing equipment; storing, distributing, and accounting for stores of materials; operating telephone switchboards, distributing mail and delivering messages; and performing other clerical duties.

For example: clerical supervisors (except equipment operators) of general office clerical occupations, secretaries and stenographers, typists and related keyboard operators and the like, supervisors of office and computer equipment operators.

46-47 CLERICAL OCCUPATIONS, EXCEPT EQUIPMENT OPERATORS*

This major group includes occupations concerned with preparing, transcribing, transferring, systematizing, and preserving written communications and records; collecting accounts; gathering and distributing information; storing, distributing, and accounting for stores of materials; operating telephone switchboards, distributing mail, and delivering messages; and performing other clerical duties. Occupations concerned with the operation of computing and office machines are classified in major group 48.

For example: secretaries and stenographers, typists and related keyboard operators, general office clerical occupations, information clerks, communications equipment operators, correspondence clerks and order clerks, cashiers and bank tellers, record clerks, bookkeepers, billing, accounting, and statistical clerks.

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*The Business and Office Division of the American Vocational Association (AVA) and the National Business Education Association (NBEA), as well as teacher educators, supervisors, and classroom teachers, have taken exception to use of the term "Clerical" in these titles. These concerns have been transmitted to the Office of Management and Budget for consideration and possible title revision.

48 COMPUTING AND OFFICE EQUIPMENT OPERATORS

This major group includes occupations concerned with operating office and computing machines as a substantial part of their work. Workers using machines incidentally in the course of their activities are not necessarily classified here.

For example: computer and peripheral equipment operators; billing, posting, and calculating machine operators; duplicating, mail, and other office machine operators.

51 PROTECTIVE SERVICE OCCUPATIONS

This major group includes occupations concerned with providing protection against fire, accidents, damage, and other emergencies, and maintaining custody of prisoners in jails, reformatories, or penitentiaries.

For example: firefighting and fire prevention occupations, police and detectives, guards.

52 SERVICE OCCUPATIONS, EXCEPT PRIVATE HOUSEHOLD AND PROTECTIVE

This major group includes occupations primarily concerned with providing catering services including cooking, preparing and serving food and beverages; providing accommodation services; maintaining cleanliness in establishments, such as hotels, motels, lodging houses, apartment and office buildings; assisting health practitioners; controlling pests and vermin; escorting guests and handling baggage; preparing sleeping accommodations; cutting and styling hair, and giving beauty treatments to patrons; providing personal services, such as ushering and arranging for patrons' comfort on tours, aboard ships and airplanes; washing, cleaning, drying, pressing, and dyeing apparel and textile furnishings; cleaning building interiors and equipment, operating elevators, and performing minor maintenance repairs; and providing other related services.

For example: food and beverage preparation and service occupations; health service occupations (DENTAL ASSISTANTS, health aides, nursing aides, orderlies, and attendants); cleaning and building service occupations, except private household; personal service occupations; cosmetologists, guides, ushers, welfare service aides, child care workers, except private household.

53 PRIVATE HOUSEHOLD OCCUPATIONS

This major group includes occupations concerned with the performance of household tasks in and around a private dwelling in which the employer is the individual for whom these tasks are performed. Occupations performed by employees of establishments providing such services to dwellings on a contract basis are classified in Service Workers, except Private Household.

For example: day worker, launderer and ironer, private household cook, housekeeper and butler, private household child care worker, cleaner, and servant.

55 FARM OPERATORS AND MANAGERS

This major group includes occupations concerned with managing land, labor, and capital in order to maximize production and profits. Skills in and knowledge of the production and marketing of plants, animals, and their products are required. Managers' and/or operators' skills and knowledge requirements vary according to the type and size of farm enterprise. Performs duties described under master title for Managers.

For example: farmer (working proprietor), farm manager

57 FORESTRY AND LOGGING OCCUPATIONS

This major group includes occupations concerned with the maintenance of woodlot and forest stands; also in the felling and removal of trees and the harvesting of forest products such as sap, Christmas trees, and decorative greens. Operators of material moving equipment are classified in minor groups 641 and 651.

For example: supervisors of forestry and logging workers, forestry workers except logging, timber cutting and related occupations, logging occupations.

58 FISHERS, HUNTERS, AND TRAPPERS

This major group includes occupations concerned with commercial or sport fishing, bounty hunting, and commercial or bounty trapping. Includes catching or gathering of aquatic animal life using seines, nets, lines, or traps; the searching for and taking of, dead or alive, animals and wild pest birds by a variety of means, including weapons, poisons, and traps.

For example: captains and other officers of fishing vessels, fishers, hunters, and trappers.

61 CONSTRUCTION TRADES

This major group includes occupations concerned with constructing, altering, and maintaining buildings, other structures, roads, bridges, pipelines, and similar projects. Most of the occupations require two or more years of specific vocational preparation. Although some require less, the major group excludes elemental workers who may be assisting workers in the included occupations. Although the majority of these occupations are found in the construction industry, they may be found in virtually every two-digit Standard Industrial Classification Major Group. Construction laborers are classified in the major group 81.

For example: brickmasons, stonemasons, and hard tile setters; carpenters and related workers; electricians and power transmission installers; painters, paperhangers, and plasterers; plumbers, pipefitters and steamfitters; construction trades helpers.

64-65 TRANSPORTATION AND MATERIAL MOVING OCCUPATIONS

The transportation occupations group includes occupations concerning the operating and controlling of equipment used to transport people or materials using vehicles. The materials moving occupations group is concerned with the operation of material moving equipment, except transportation. This equipment is usually stationary, or with limited range.

For example: motor vehicle operators (tractor-trailer-truck drivers, heavy truck drivers, bus drivers, taxicab drivers, and chauffeurs), rail transport occupations, water transportation occupations, airplane pilots and navigators, transportation occupations helpers, material moving equipment operators (hoist and winch operators, crane and tower operators, excavating and loading machine operators, industrial truck and tractor equipment operators), material moving equipment operators' helpers.

67 MECHANICS AND REPAIRERS

This major group includes occupations concerned with the adjustment, maintenance, part replacement, and repair of tools, equipment, and machines. Installation of such equipment may be included in this division if installation is usually done in conjunction with other duties of the repairers. Inspectors of such equipment are included if knowledge of the functions of the equipment is necessary to conduct inspection tests.

For example: vehicle and mobile equipment mechanics and repairers; garage and service station related occupations; industrial machinery repairers; machinery maintenance occupations; electrical and electronic equipment repairers; heating, air-conditioning, and refrigeration mechanics.

72 PRECISION PRODUCTION OCCUPATIONS

This major group includes occupations requiring a high degree of precision in the tasks performed, for the attainment of standards. These occupations in many cases require an ability to interpret detailed instructions and specifications. The amount of time spent in training for the exercise of these occupations is substantial, in most cases at least six months to a year and in many cases several years. Certain occupations in which similar tasks are performed but which do not require so high a degree of precision, judgement, and training are classified in other groups in this division.

For example: precision metal workers (tool and die makers, machinists, boiler-makers); precision woodworkers; precision printing occupations (typesetters, lithographers); precision textiles, apparel, and furnishing machine workers (dressmakers, tailors, upholsterers, shoemakers, laundering, cleaning, and dyeing occupations); precision workers of assorted materials (dental laboratory and medical appliance technicians); precision food production occupations (butchers, bakers, candymakers); precision inspectors, testers, and graders.

77 FABRICATORS, ASSEMBLERS, AND HAND WORKING OCCUPATIONS

This major group includes occupations concerned with the fabrication, assembly, and hand finishing or other hand work involved in the production of manufactured goods. Hand tools may be used, but occupations concerned with producing goods using machinery are classified in major groups 73-76. These occupations may include the use of hand tools and hand-held power tools.

For example: welders and solderers; assemblers (framer, lamp-shade assembler, piano stringer, chair upholsterer, slip-seat coverer); hand working occupations (hand sewing occupations, hand cutting and trimming occupations, hand molding and casting occupations, hand engraving and printing occupations).

99 OCCUPATIONS NOT ELSEWHERE CLASSIFIED

This division includes occupations which cannot be classified in any other division. For purposes of this report, this division also includes occupational areas not preprinted on Form 2404-7, Part D, Section 1. Each State must refer to the SOC Manual to actually determine which occupations ought to be reported here.

For example: scuba diver, photographer helper, observer helper, or seismic prospecting.

GLOSSARY OF PLACEMENT AND FOLLOW-UP TERMS

GLOSSARY OF PLACEMENT AND FOLLOW-UP TERMS

Prerequisite to any attempt at reporting placement and follow-up data is the adoption of common terminology. The terms included here constitute a sampling of those needed for effective communication in this field. The definitions are extracted from the state of Florida's *Community College Management Information System (CCMIS) Procedures Manual.*

Completion Award.

An award certifying completion of a program of study. There are six types of degrees/certificates that may be awarded.

Associate in Applied Science. An award certifying the completion of a two-year skilled/semiskilled program of study.

Associate in Arts. An award certifying the completion of a two-year lower-division undergraduate program of study that is applicable to a bachelor's or advanced degree.

Associate in Science. An award certifying the completion of a two-year technical program of study. In some cases, students completing these programs transfer to a university to complete a higher-level degree in the field. Therefore, the Associate in Science degree is not necessarily a terminal degree.

Certificate of Applied Sciences. An award certifying the completion of a vocational program of study that is usually of a duration longer than one term (semester), but less than two years of full-time study.

Certificate of Training. An award certifying the completion of a vocational program of study that is one term (semester) or less of full-time study.

Technical Certificate. An award certifying the completion of a technical program of study consisting principally of the prescribed specialized courses in the program area. These are programs that usually consist of one academic year of full-time study.

Follow-up Studies.

The systematic examination of the performance of former students in the areas in which they received training.

Occupational Program.

A program of study designed to prepare persons for immediate employment in an occupation (including homemaking).

Postsecondary Technical. A program of study and related courses designed to prepare persons for employment at the technical level, which is between that of the skilled and the professional. These are usually two-year programs of study made up of college-level credit courses that are, for the most part, transferable.

Postsecondary Skilled/Semiskilled. A program of study and related courses designed to prepare students for employment at a semiskilled or skilled level, which is between that of the unskilled and the technician. There are usually clock-hour or institutional-credit programs and courses.

Placement Services.
Assistance to school graduates or leavers, depending on the desires of the individual to obtain gainful employment, to enroll for further education, or to engage in a combination of employment and further education.

Program Completer.
A student who either finished a planned sequence of courses, services, or activities designed to meet a vocational occupational objective and obtained entry-level job skills, or completed a program designed for transfer (university parallel).

Program Leaver.
A former student who had declared an intention to complete a program and who has not completed the program and has not enrolled in the institution for two consecutive semesters. Also included is the former student who notified the institution of the intent not to enroll again in that institution prior to program completion.

Program Length.
The number of semester credit hours or clock hours required to complete the program.

Program of Study.
A group or combination of related courses, self-contained classes, or instructional units organized for the attainment of specific educational objectives.

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